Israeli innovations have shaped our lives in the 21st century—from mobile phone technology, voicemail and drip irrigation to conserve water, to renewable energy solutions and the ingestible pill camera to diagnose cancer. MIT has also produced an unending stream of advancements, many of them world-changing. Among them are duplicating photosynthesis in order to store solar energy, using RNA interference to silence multiple genes at once, computer techniques that automatically decipher ancient languages and discovering evidence of water ice and organic material on Mercury. Spend a day at MIT, and you’ll notice that hands-on learning and out-of-the-box thinking pervade the Institute. The Israeli culture and economy, built on teamwork, initiative and innovation, is a great match for the MIT ethic. The MISTI MIT-Israel Program facilitates dynamic connections between the thinkers and ideamakers of the MIT community and their counterparts in Israel.

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I. Overview

“At MIT, our mission directs us to advance knowledge and educate students in service to the world. We best serve this mission through our longstanding practice of fostering active engagement with international academic institutions and open dialog among people from all nations. Just as MIT faculty engage extensively with colleagues around the world, we encourage our students to broaden and deepen their thinking through experiences across the globe.”

MIT President L. Rafael Reif

MIT International Science and Technology Initiatives (MISTI), founded in 1983, provides MIT students with a high quality, substantive professional teaching or research experiences abroad in companies, universities, research institutions and high schools. MISTI has sent approximately 6,900 MIT students abroad to date, and currently sends over 880 students annually to twenty countries around the world. MISTI’s unique programmatic infrastructure involves pre-departure preparation, a personalized placement process, in-country support, post-internship interaction, and continued opportunities for engagement and learning. Hands-on international learning has numerous educational benefits, broadening and deepening students’ academic, personal, intercultural and professional knowledge, skills and perspectives in a global context. MISTI also promotes collaborations between MIT faculty members and their counterparts abroad, and advances MIT’s outreach efforts through partnerships with international companies, universities and research institutions.

Formally incepted in 2007, the MISTI MIT-Israel program recruits, selects, and places highly-qualified and motivated MIT students in internships across Israel—a country marked by innovation, entrepreneurship, and cutting-edge research, particularly in the STEM (science, technology, engineering and mathematics) fields, as well as a rich cultural history. The MISTI MIT-Israel program has grown in numbers, diversity of opportunities, and depth of the educational process: from 15 students in the summer of 2008 to 60 students this past year; from industry and research internships to the addition of teaching opportunities and experiences at non-profits and startups; from abbreviated spring training to a six month long global competency educational process. MISTI MIT-Israel has become a key program for engagement between the Institute and Israel.

In 2014-2015, MISTI MIT-Israel sent 38 students to intern in universities and companies and 22 to teach in Israeli high schools as part of Global Teaching Labs program. MISTI MIT-Israel maintains over 100 host institutions and sponsored 14 Israel-related events at MIT.

Before beginning their internships, students are prepared through intensive and comprehensive trainings that cover Israeli culture, workplace environment, history and current events. The preparation is hands-on and multifaceted, encouraging students to learn from a variety of resources: from the academic Israel culture course, to meeting with Israeli MIT students for a first-person perspective on what they learned in training. Once in-country, students completed assignments to augment and deepen their understanding of the work and daily culture, met with MIT alumni in their regional area, reflected on their experiences, and viewed their Israeli internships in a global context.

The MISTI Global Seed Funds (GSF) promote and support early-stage collaboration between MIT faculty and their international counterparts. MISTI MIT-Israel offers two faculty-lead funds as part of the MISTI GSF program. Many of the funded projects lead to additional grants and the development of valuable
long-term relationships between international researchers and MIT faculty, who are encouraged to involve MIT students in their projects. The Ben-Gurion University of the Negev Seed Fund was established in May 2014, and the new Israel Seed Fund has received a record-breaking number of applications in its first application cycle.

Looking forward, the MISTI MIT-Israel program aims to raise endowment funds to secure the program in perpetuity; to develop more interactive educational modules in order to enhance students Israel experience (before, during and after the internship); to increase the number of company internships in line with student demand (architecture, biotech, water, cyber security); and to explore possible additional faculty and student short-term Israel educational seminars.

As our eighth year draws to a close, it is our pleasure to present a detailed 2014-2015 Annual Report, and share a wide perspective of this year’s accomplishments and future goals.
In its short 67 years, Israel has emerged as a global leader in agritech, biomedical development, biotechnology, clean-tech, cybersecurity, energy, medical devices, pharmaceuticals, and water technology. Israel, only 8,020 square miles, is home to one of the highest density of start-ups in the world. What Israel lacks in natural resources is made up for by the social capital of its citizens: audacity, innovation and ingenuity. Israel is one of the most dynamic entrepreneurial economies, and these qualities create an enriching environment for growth and learning across disciplines.

MIT’s motto, Mens et Manus, emphasizes education through practical application. Israel provides the environment to maximize hands-on learning in world-class institutions. The Israeli culture and economy, built on teamwork, initiative and innovation, is the perfect match for the MIT ethic.

Israel’s vibrant culture, extreme landscapes, historical importance, and multiculturalism provides a unique experience for students who are looking for an environment which is equally exciting as their internship or research work.

---

### Why Israel?

**AKA "Start-Up Nation"**

- **Start-ups in Israel**: 3,850
- **Global Investor Confidence Level**: #2
- **Capacity for Innovation**: #3
- **Venture Capital**: $1 Billion
- **Quality of Research Institutions**: #3
II. Student Participation

60 MIT-ISRAEL STUDENTS

38 INTERNS
22 GLOBAL TEACHING LABS TEACHERS
2813 DAYS SPENT INTERNING

16 ACADEMIC DEPARTMENTS REPRESENTED
- CIVIL AND ENVIRONMENTAL ENGINEERING
- MECHANICAL ENGINEERING
- MATERIALS SCIENCE AND ENGINEERING
- CHEMISTRY
- BIOLOGY
- ELECTRICAL ENGINEERING & COMPUTER SCIENCE
- PHYSICS
- BRAIN & COGNITIVE SCIENCES
- CHEMICAL ENGINEERING
- ECONOMICS
- EARTH, ATMOSPHERIC, AND PLANETARY SCIENCES
- MANAGEMENT
- MATHEMATICS
- BIOLOGICAL ENGINEERING
- LITERATURE
- LINGUISTICS AND PHILOSOPHY

STUDENTS REPRESENTED A VARIETY OF LEVELS
- 12 FRESHMEN
- 11 SOPHOMORES
- 12 JUNIORS
- 20 SENIORS
- 1 MBA CANDIDATE
- 1 M.ENG CANDIDATE
- 2 PHD CANDIDATES
- 1 PHD GRAD

Top Three Most Popular Cities
1. Greater Tel Aviv
2. Greater Haifa
3. Jerusalem

20 STUDENTS PLACED AT UNIVERSITIES
15 STUDENTS PLACED AT COMPANIES
3 STUDENTS PLACED IN GOVERNMENT & OTHER

Top Three Most Common Majors
1. Electrical Engineering & Computer Science
2. Mechanical Engineering
3. Biological Engineering
III. Country-Specific Preparation and Training

The MISTI MIT-Israel program includes comprehensive, intensive and country-specific pre-departure trainings, in-country programming, and post-internship evaluation and reflection upon the students’ return. In addition to completing coursework in the language, culture, history and politics of Israel, students participate in a series of MISTI-designed trainings with topics such as: raising overall cultural awareness, navigating the workplace, and health and safety training. Our students’ leadership skills are reinforced through in-country assignments, post-internship reports, re-entry meetings and subsequent coursework related to their experiences.

Israel-Related Courses

For a deeper and richer understanding of their host country, culture, and history, students are required to take an Israel-specific course. The majority of MISTI MIT-Israel interns chose to take the for-credit MIT course “Israel – History, Culture and Identity” with Professor Nahum Karlinsky (12 credits during the spring/9 credits during January IAP). In addition to the interns, many non-MISTI students enrolled in the course.

This course provides an understanding of modern Israel, Israeli history, politics, economy, culture and identity. Among the topics explored are: Israeli political regime and society; ethnic relations in Israel; the struggle over Israel’s identity; and the Arab minority. These topics are taught through a broad array of modes of expression including literature, music, film, documentaries, art and academic historical writings.

Students who opted to take other Israel-related courses took part in a supplementary four-hour workshop, “Israel Start-Up Nation: Challenges and Opportunities,” with Dr. Ehud Eiran of the University of Haifa. They learned about the factors which helped to shape Israel as the start-up and research powerhouse it is today. MIT-Israel also ran “Israel: When Challenges Become Opportunities,” an 8-hour class for graduate and Sloan students during the annual Sloan Innovation Period.

Hebrew Language Training

Prior to their internships, MIT-Israel prepares students with Hebrew language basics. All students without prior Hebrew knowledge engaged with peer teachers during four-hour sessions (for Global Teaching Labs over IAP), or eight-hour sessions (for...
summer internships) to learn the alphabet, key phrases and simple vocabulary.

**Training Sessions**

In addition to the Israel-related academic course and Hebrew language study, students participated in six hands-on training sessions and a day-long retreat.

**Students explored** personal goals and expectations for their internship; how to prepare for their internship; how to navigate Israeli society and culture; and the differences between the US and Israel.

**Students learned about** the must-see places in Israel and in the region; safety and security; cross-cultural communication; navigating the Israeli workplace; getting the most benefits out of an internship; and how to network in Israel.

**Students met with** MISTI MIT-Israel alumni to get a first-hand understanding about their experiences and best-practices in their internship city or site; and Israeli students at MIT who shared their personal experiences, Israeli culture tips, and city-specific briefings.

**Students took part in the trainings:** “Working in the Israeli Lab” with MIT-Israel Faculty Director Dean Christine Ortiz; “Hot Topics in Israel” with Dr. Daniel Sobelman of the Harvard Belfer Center for Science and International Affairs; MISTI-wide training “Communicating Across Cultures” with April Julich Perez, Associate Director of MISTI and Dr. Bernd Widdig, Director of International Affairs at MIT; and “Health and Safety” with the staff of MIT Medical and Violence Prevention & Response.

MIT-Interns use the “11 Cultural Factors of Israel” as a lens in which to view their Israeli experiences. The factors include: Leaving Egypt: From Slavery to Freedom; Mount Sinai; Expulsion: Diaspora – Israel; People of the Book; Living as a Minority in a Foreign Land: Persecution, Oppression and the Holocaust; the Founding of the State of Israel: The Existential Struggle — In Constant Survival Mode; Melting Pot; Army Service; Limited Resources; The Geo-Political Situation; and Family.
Student Reflection and In-Country Learning

Opportunities for learning and reflection are built into the MISTI MIT-Israel process, beginning with the application and extending far past the end of the official internship dates.

As part of their MIT-Israel application, students submitted essays comparing the culture of MIT to another culture they experienced. Students used this assignment as a foundation for the cultural trainings. During the first month of their internships, students submitted cultural reflection essays describing a scene that exemplified an Israeli cultural practice that stood out to them. They shared data about the encounter, analyzing how the behavior could be understood in the context of their Israel training. Thus, students were able to process these cultural differences and understand what they had encountered.

During the MISTI MIT-Israel Seminar in Israel, Managing Director David Dolev led the sessions “Overcoming Workplace Obstacles,” and met with students in small groups. The students also took part in the session “My Internship: Aims and How to Get There.”

While in Israel, students were required to meet with MIT alumni in their region to network and learn about the alumni’s perspectives on Israel. Students also met with a leader in their field and discussed how their project and field fit into the Israeli and global context.

Upon returning from Israel, students participated in a re-entry session to practice articulating what they learned in their experiences and to explore next steps in their global journey. As Shivani Chauhan (’18) stated in her elevator pitch back on-campus:

“This summer I learned how to create a website, ride a camel, and count to twenty in Hebrew. I did all this by participating in MISTI. This summer, I was at an Israeli university working at an image processing lab...I came in not knowing a lot about web development so I picked up a lot of problem solving. It was a great experience out of the lab also. I gained a lot of independence by learning how to travel and interact with people in a foreign country. I made a lot of great friendships both with Israeli and internationals, and other MIT students.”

MIT-Israel interns met with many renowned MIT alumni and Israeli field leaders

(From Left to Right): Justin Yuan and Joy Yu met with Professor David Harel (PhD ’78) of the Weizmann Institute of Science, and winner of the 2004 Israel Prize for his work in computer science; MIT-Interns met with Dennis Wilson (’14), MISTI MIT-Israel alumnus and current software engineer at Infinidat, who moved to Israel after he graduated; Amita Gupta met with Hanan Gilutz (MBA ’80), co-founder of Orbotec Ltd. and his wife, Gabi.
IV. MIT-Israel Internship Experiences

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Major</th>
<th>Host</th>
<th>Project</th>
<th>Image</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aaron Scheinberg</td>
<td>PhD</td>
<td>Earth, Atmospheric and Planetary Sciences</td>
<td>Amdocs · Ra’anana</td>
<td>Created tools to help parameterize and predict bug detection and resolution in software testing</td>
<td><img src="image1.png" alt="Aaron Scheinberg" /></td>
</tr>
<tr>
<td>Amelia Mockett</td>
<td>Senior</td>
<td>Biological Engineering</td>
<td>The Knesset · Jerusalem</td>
<td>Completed comparative research of the local and socio-economic effects of renewable energy deployment in OECD countries; a comparative analysis of hydraulic fracturing landscapes and policies; and preliminary research into the relative safety of crop improvement methods</td>
<td><img src="image2.png" alt="Amelia Mockett" /></td>
</tr>
<tr>
<td>Amita Gupta</td>
<td>Senior</td>
<td>Chemical Engineering and Biology</td>
<td>OrbiMed Advisors · Herzliya</td>
<td>Created two comprehensive databases listing the life science companies and licensable technologies in Israel to facilitate future partnerships and decision-making within the company</td>
<td><img src="image3.png" alt="Amita Gupta" /></td>
</tr>
<tr>
<td>Anjali Krishnamachar</td>
<td>Sophomore</td>
<td>Mechanical Engineering</td>
<td>Igor Verner · Technion - Israel Institute of Technology</td>
<td>Investigated robot learning using humanoid robots, utilizing the ROBOTIS Bioloid kit and software; also used Bluetooth and Zigbee models to set up communication between the robot and computer, and conducted stability analysis using Python and PTC Creo Parametric</td>
<td><img src="image4.png" alt="Anjali Krishnamachar" /></td>
</tr>
<tr>
<td>Ariel Jacobs</td>
<td>Sophomore</td>
<td>Electrical Engineering &amp; Computer Science</td>
<td>Amdocs · Ra’anana</td>
<td>Worked on the “SmartRoom” project which prepares conference rooms when users enter</td>
<td><img src="image5.png" alt="Ariel Jacobs" /></td>
</tr>
<tr>
<td>Cali Warner</td>
<td>Junior</td>
<td>Mechanical Engineering</td>
<td>Rachel Kallus · Technion</td>
<td>Worked on a participatory mapping project in Haifa by conducting case study research and providing recommendations to the project team on the challenge of integrating the project into a digital platform</td>
<td><img src="image6.png" alt="Cali Warner" /></td>
</tr>
</tbody>
</table>
Caroline Morganti ∙ Junior ∙ Electrical Engineering & Computer Science  
Host: Beam Riders ∙ Nazareth  
Project: Developed gamification techniques for soft skills development, and built a web interface to link an app to the SQL database

Chieh-Ming (Jamin) Liu ∙ Senior ∙ Biological Engineering  
Host: Endospan ∙ Herzliya  
Project: Researched existing stent technology and test protocol rationale and the safety threshold of radial forces exerted on arterial walls and gas embolism caused by stent deployment

Christine Konicki ∙ Sophomore ∙ Electrical Engineering & Computer Science  
Host: Mellanox ∙ Yokneam  
Project: Designed filters for high-speed inter-computer communication channels produced at the company by the algorithms and signal integrity team

David Flamholz ∙ Senior ∙ Mechanical Engineering  
Host: Keter Plastic ∙ Karmiel  
Project: Automated the assembly of a new series of tool box that was previously assembled manually; designed assembly line automation solutions for polycarbonate manufacturing lines

Dayna Wilmot ∙ Freshman ∙ Brain & Cognitive Sciences  
Host: Zahava Solomon ∙ Tel Aviv University  
Project: Wrote a paper about the current state of the inadequacies in PTSD diagnoses

“This experience caused a huge amount of growth in me. Not only do I have increased confidence that I can be resilient, hardworking in a new environment, and adaptable to changing conditions, but I also can feel comfortable moving on going abroad next year. This experience made me want to do more MISTI programs, which I certainly plan to!”  
-Dayna Wilmot
Diego Lazares • Freshman • Electrical Engineering & Computer Science  
**Host:** Amdocs • Ra’anana  
**Project:** Created a web app to identify how Amdocs employees collaborate and find ways to improve collaboration throughout the company

Ethan Klein • Senior • Chemistry and Physics  
**Host:** Efraim Inbar • Bar Ilan University  
**Project:** Researched innovation in the Israeli Air Force between 1973-1982

Fanqi (QeeQee) Gao • Junior • Biology  
**Host:** Mount Carmel Arabic Immersion • Daliyat al-Karmel  
**Project:** Studied Arabic language in an immersive program located in a Druze village*  
*Since the founding of the program, several students have also taken Hebrew language classes

Felipe Hernandez • Junior • Mathematics  
**Host:** Ron Holzman • Technion - Israel Institute of Technology  
**Project:** Research in the mathematical branch combinatorics

Gil Goldshlager • Sophomore • Mathematics  
**Host:** Ron Shamir • Tel Aviv University  
**Project:** Designed an efficient streaming genome assembler

“By specifically doing MISTI in Israel, I got the rare opportunity to grow both culturally and professionally. The work I did in my lab was probably the most interesting project I’ve ever worked on, and the experience of travelling around Israel was one of the most rewarding cultural experiences I’ve ever had.”  
-Gil Goldshlager
Henry Lubowe ∙ Sophomore ∙ Mechanical Engineering
Host: Gizmo Engineering ∙ Moshav Ein Vered
Project: Worked to design and create prototypes for a drone attachment that, with extended battery life and increased lifting capacity, will outcompete existing options in higher price ranges and provide users with a more customizable experience.

Jason Fischman ∙ Sophomore ∙ Mechanical Engineering
Host: Rainbow Medical/Affix Medical ∙ Herzliya
Project: Worked to design and develop a medical device aimed at treating Ventricular Tachycardia using catheter ablation.

Jessica Blumenfeld ∙ Sophomore ∙ Biological Engineering
Host: Eran Segal ∙ Tel Aviv University
Project: Examined transgenic fruit flies that express human proteins associated with Alzheimer’s disease with the goal of isolating a drug that ameliorates the effects of the human Alzheimer’s proteins and the severity of eye malformation.

Jesus Moreno ∙ Junior ∙ Materials Science and Engineering
Host: Elise Brezis ∙ Bar Ilan University
Project: Examined the homogeneity of the economic elite; built a dataset on the education of a sample of wealthy elite and the effects that identity homogeneity may have on behavior and decision-making, and ultimately economic outcomes.

Jonathan Harvey Buschel ∙ Freshman ∙ Electrical Engineering & Computer Science
Host: Yossi Rosenwaks ∙ Tel Aviv University
Project: Worked on using electromagnetic phenomena to create a “virtual nanowire” on a chip to use its properties to create a variety of sensors with tunable sensitivity.

“I got to experience much more of the world and understand many more cultures! In Israel, I explored everywhere...In all these places, I learned more about a religion or a community or a philosophy. To me, this is the most valuable experience I could have had. I also got to meet many interesting people throughout the world, each of whom inspired me in some way or with some idea. Truly, this MISTI experience was incredible.”

-Jessica Blumenfeld
“Living and working abroad independently was an awesome experience. I picked up some Hebrew and now I love Israel so much. Experiencing a different culture is just such a valuable experience; I think my worldview has expanded a lot and just seeing how other people live differently from you is so fascinating.”

– Joy Yu

Josh Blum · M.Eng Candidate · Electrical Engineering & Computer Science
Host: Mark Silberstein · Technion – Israel Institute of Technology
Project: Built a stream processing GPU based system

Joy Yu · Freshman · Electrical Engineering & Computer Science
Host: Eran Segal · Weizmann Institute of Science
Project: Wrote Python scripts to benchmark, analyze and create graphs to determine the precision of computational tool MetaPhlAn’s results to profile the composition of microbial communities as part of the Personalized Nutrition Project which uses individuals’ gut flora and glucose levels to create personalized dietary recommendations

Justin Yuan · Junior · Biological Engineering
Host: Yosef Yarden · Weizmann Institute of Science
Project: Researched the feasibility of long non-coding RNAs as biomarkers for breast cancer

Kathryn Keen · MBA Candidate · Management
Host: Preen.me · Jaffa
Project: Worked to expand business development efforts into new verticals

Kayla Ngan · Senior · Chemical Engineering and Management
Host: Check Point Software · Tel Aviv
Project: Created new features for the calendar application in the enterprise mobile security product Capsule as an iOS developer
Miriam Prosnitz · Senior · Electrical Engineering & Computer Science
Host: Asymmetric Medical · Kfar Mordechai
Project: Worked primarily in business development, with projects including assembling the main metrics by which the company rates different surgical procedures, interviewing clinicians to better understand clinical needs, and information gathering.

Morris Alper · Junior · Linguistics & Philosophy
Host: VoiceItt · Jerusalem
Project: Helped develop a speech-recognition application for people with speech disabilities.

Oron Propp · Freshman · Mathematics
Host: Gil Kalai · Hebrew University of Jerusalem
Project: Investigated a combinatorial conjecture arising from quantum metrology.

Rachel Galowich · Freshman · Civil & Environmental Engineering
Host: International Conservation Center/Israel Antiquities Authority · Akko
Project: Documented and planned the restoration of Turkish-era rule structure Khan a-Shewarda in Old Akko.

Robert Vasen · Freshman · Brain & Cognitive Sciences
Host: Nachum Ulanovsky · Weizmann Institute of Science
Project: Used a Fourier-based approach to investigate how grid cells behave while navigating through 3-dimensional space using bats as a novel animal model.

“Living in Israel amongst other Israelis and seeing what it is like for an Israeli to live from day-to-day was by far the most enriching part of my summer. Expanding my cultural horizons is not something I could have done had I stayed in the US…I learned that coming to a new place where the prevailing culture, customs, and language were different than my own and creating a place I could call home for a little was something I could do.”

-Robert Vasen
Sherri Green · Freshman · Mechanical Engineering
Host: Igor Verner · Technion - Israel Institute of Technology
Project: Developed a robot learning scenario to be used for education, and programmed the robot to improve its ability to not fall over while holding various weights; developed communication between the robot and a computer via a Python program

Shivani Chauhan · Freshman · Electrical Engineering & Computer Science
Host: Yoav Schechner · Technion - Israel Institute of Technology
Project: Created a webpage for the lab and improved an image processing algorithm

Stephen White · Freshman · Electrical Engineering & Computer Science
Host: Asaph Aharoni · Weizmann Institute of Science
Project: Created a database for over 8,000 plant metabolomics entries for the research lab

Tally Portnoi · Sophomore · Electrical Engineering & Computer Science
Host: Cellepathy · Netanya
Project: Worked to improve Cellpathy’s sensor algorithms detecting vehicular trips with low latency, high accuracy, and low power usage in the Android application that restricts phone usage when a user is driving

“[T]his MISTI experience taught me to be curious and ask many questions about the cultural differences I see, because I find them fascinating. Through working and traveling the country, I feel like I have a greater understanding of an area of the world where I previously had no knowledge. Through the friendships and conversations I’ve had [in Israel], I have developed a greater empathy and respect for the people who live here and in the surrounding regions. The empathy helps me better relate to people in very different circumstances and helps me be a better global citizen.”

-Shivani Chauhan
“Being in another country such as Israel gave me the chance to experience first-hand a different culture than the one I am already comfortable with. My summer in Israel has been a great experience, and I would not hesitate to return in the future.”

-Tru Dang

Tobi Rudoltz · Junior · Mechanical Engineering  
Host: Avi Shroeder · Technion - Israel Institute of Technology  
Project: Researched liposomes to deliver a cell-free protein production system to cells

Tru Dang · Junior · Biological Engineering  
Host: Dr. Pinchas Halpern · Tel Aviv Sourasky Medical Center  
Project: Conducted experiments to see whether performing manual ventilation at clinically constant and appropriate volumes and rates for a long duration of time would be feasible

Wanqin (Helen) Xie · PhD Candidate · Chemistry  
Host: Sameer Mabjeesh · Hebrew University of Jerusalem  
Project: Applied big data techniques to farm management, primarily focused on hay and feeding to ultimately determine the best feeding management strategy to reduce costs and influences of extreme weather
V. Global Teaching Labs

Global Teaching Labs (GTL), MISTI’s groundbreaking teaching program, enables students to become teachers for one month during MIT’s January Independent Activities Period. Undergraduate and graduate students draw from their world-class science and technology education at MIT and use these hands-on and cutting-edge methodologies to design self-developed curricula, reaching hundreds of Israeli high-school students across 15 different communities.

This in-depth immersion into Israel’s culture exposed students to the differences of the educational system while giving them the opportunity to sharpen their own skills by teaching what they’ve learned at MIT and acting as role models to inspire Israeli high school students. Global Teaching Labs is one piece of a wider vision to offer a diverse portfolio of options during various times of the year for MIT students to professionally engage with Israel and to learn to navigate the global workplace. This program attracts top students who are passionate about sharing MIT’s unique approach to science, engineering and entrepreneurship.

In 2015, MIT-Israel sent 22 students to teach: from the classrooms of Tel Aviv, to high schools in cities in the periphery, to an educational greenhouse of a kibbutz—sites geographically distributed all over Israel. Teams worked with the Amal and ORT/Israel Sci-Tech school networks and The Ecological Greenhouse at Kibbutz Ein-Shemer. The following three tracks were offered to MIT students:
### Science and Technology Seminars

- **ORT/Sci-Tech School Network**
  - Locations:
    - Afula
    - Lod
    - Yokneam

- **Amal School Network**
  - Locations:
    - Tel Aviv (Tel Aviv, Holon)
    - Central Israel (Taiybe, Qalansawe, Hadera, Emek Harod)
    - Northern Israel (Nahariya, Tzfat, Kisra Sumei)

- Students work in teams of 2-3
- Students teach science, math, computer programming, and English using MIT hands-on learning methods
- Students teach at one school for all four weeks
- Students are housed in home-stays

### Entrepreneurship and Leadership Seminars

- **Amal Team North**
  - Lee Gross, Nicolas Rakover, Jiaming Zeng, Mei Zuo

- **Amal Team Central**
  - Shilpa Agrawal, Steven Fine, Linda Jing

- **Amal Team Tel Aviv**
  - Eric Klinkhammer, Ambika Krishnamachar, Jessica Yang, Catherine Yun

- Students work in teams of 3-4
- Students self-design seminars focusing on entrepreneurship, leadership, product design, and marketing
- Students travel to four different schools in the same region, teaching at one school per week

### The Ecological Greenhouse at Kibbutz Ein-Shemer Eco-Seminars

- **Team Afula**
  - Eann Tuan, Jessica Yang, Sze Zheng Yong

- **Team Lod**
  - Haley Cope, Eva-Lotta Kasper

- **Team Yokneam**
  - Isabella Espinel, Katherine Mizrahi

- **Team Ein-Shemer**
  - Emma Nelson, Camille Richman, Leah Slaten, Jacob Tims

- Students work in teams of four
- Students self-design seminars around ecological topics, including aeroponic farming, rapid prototyping using 3D printing, composting, and scientific English
- Students work with two local high-schools
- Students are housed at Kibbutz Ein-Shemer
Selected Reflections from Israeli High-School Students

“I would like to thank you so much. I know this might seem exaggerated, but you caused my general perspective to reconstruct, [with the] motivation [that] you give as a person and tutor. From the remarkable achievements you have pinned down in your life...to the ideology you share as a tutor. I'm saying all this because you basically made the moon look like one step away. I went through this phase of dreaming about MIT but now I'm going through this phase where MIT is a goal.”

“This week with you guys was amazing. Thank you for everything you taught us, it was very interesting, important and useful. I wish you luck in MIT and also afterwards!! It was so fun meeting you and getting to know you, you are so nice and you always helped us when we didn't understand something I hope you will enjoy [the rest of your time] in Israel.”

Selected Reflections from MIT GTL Participants

“Through the MISTI [GTL Israel] experience I developed a stronger interest in tech-based entrepreneurship. I also learned that I really enjoyed teaching. Once back at MIT I registered for an entrepreneurship class at the Edgerton Center – it has been an enjoyable continuation of sparks ignited from MISTI Israel.”

Jessica Yang, Economics, Class of 2015

“Over the past month, I met some of the most amazing people. I met teachers who teach at the greenhouse out of pure passion for sharing their love of science, who welcomed me into not only the greenhouse but also into their lives. I met students who come to the greenhouse at every free hour that they have. Students younger than me built the greenhouse itself from the ground up. Spending the month at Ein-Shemer inspired me to bring the pure love of learning I saw in the students into my own life.”

Leah Slaten, Electrical Engineering & Computer Science, Class of 2018

“Doing MISTI MIT-Israel I learned a lot about how to be a better teacher and mentor. I learned a lot about entrepreneurship, and I learned a lot about Israeli high school culture. Additionally, I realized how much I enjoy teaching and working with kids. Teaching students from a different culture helped me think about different ways to convey information, and how students can learn effectively. I hope to continue teaching in some regard, be it doing programs similar to MISTI GTL or more local ventures.”

Steven Fine, Physics, Class of 2015
VI. Host Remarks

The vast majority of hosts were extremely satisfied with their MIT interns and researchers. Below is just a sample of the impression our interns left:

Super excellent! The intern did in 3 months work that a senior developer would do in twice the time, and brought great innovative spirit to the company.

Danny Weissberg, CEO, VoiceItt

[Our MISTI intern] learned and developed the system from scratch. He showed amazing self-learning skills and very high technical capabilities, while presenting great interpersonal skills and relationships...MISTI allows me to realize innovation faster and competitively.

Tomer Simon, Chief Architect & CTO, Amdocs

Hosting an intern of MISTI MIT-Israel has contributed greatly to our institution and is highly recommended to any professional organization... You are doing an extraordinary work!

Yuval Vurgan, Team Leader, Research and Information Center, The Knesset

MISTI interns provide an important opportunity for other research group members to experience the quality and interact with their peers from the top-notch institution.

Professor Mark Silberstein, Technion - Israel Institute of Technology

Students in this program are highly ambitious and knowledgeable.

Professor Eran Segal, Weizmann Institute of Science

The MISTI students are fantastic—I hosted 3 of them over the years—and they contributed tremendously to work in the lab.

Professor Nachum Ulanovsky, Weizmann Institute of Science

I have had good experience with two MIT students, both highly motivated to learn and make contributions to research in combinatorics.

Professor Ron Holzman, Technion – Israel Institute of Technology

MIT interns are outstanding.

Professor Efraim Inbar, Bar Ilan University
[Our MISTI intern] is a very sharp, fast learner, mature and motivated young women. She took on responsibility and was able to run with projects on her own.

Ori Weisberg, CEO, Asymmetric Medical

[Our MISTI interns] were highly motivated and interested in the project. It was a real pleasure to guide these smart and intelligent students. They did a good job.

Professor Igor Verner, Technion – Israel Institute of Technology

We have never been disappointed by students hosted in our lab. They are always highly motivated and bright.

Professor Yosef Yarden, Weizmann Institute of Science

We got a creative student with new ideas... Working with MISTI students was mutually beneficial for both parties. It brought in fresh ideas from a highly skilled [intern] and gave the student a great understanding of the Israeli startup culture.

Michael Kardosh, Managing Director, Affix Medical

It is a pleasure to have an international intern in the group, culturally, and as an academic place, it is a pleasure to teach a young person, while on the job. This was an excellent experience. [Our MISTI intern] was a very good addition to our group this summer.

Professor Yoav Schechner, Technion – Israel Institute of Technology

Israeli medical institutions have a wealth of research programs that could be well suited for collaboration with MIT researchers, and MIT students are very high quality and would fit in very well... research projects here.

Professor Pinchas Halper, Director of Emergency Medicine, Tel Aviv Sourasky Medical Center

[Our MISTI intern] made significant contributions... He demonstrated great analytical ability and creativity, and the motivation and determination needed to implement our ideas and rigorously demonstrate their correctness. We greatly enjoyed working with [our intern], would gladly collaborate with him in the future, and would highly encourage others to do so as well... MISTI is a great initiative that connects MIT students to Israeli research institutes. The smart and driven students contribute a lot to the hosting lab in their internship. They get to know Israel and identify with it.

Professor Ron Shamir, Tel Aviv University
VII. Post-Internship Outcomes & Publications

Kyle Yuan and Anirudh Arun interned with Professor Eitan Naveh of the Faculty of Industrial Engineering and Management at the Technion Israel Institute of Technology in 2013 as part of the MISTI Global Seed Fund project between MIT Professor John Carroll and Professor Naveh. They were both acknowledged in the article, “How do integrative practices influence patient-centered care?: An exploratory study comparing diabetes and mental health care” is published online and will appear in the May 2016 issue of Healthcare Management Review.

Anjali Krishnamachar and Sherri Green spent their 2015 internships in Haifa, under the direction of Professor Igor Verner of the Technion – Israel Institute of Technology. Their paper, “Self-Directed Robot Learning Experiments in Lifting Weights,” was accepted by the Artificial Intelligence and Human-Robot Interaction Symposium 2015.

David Wyrobnik, a 2013 intern at Google Israel, co-invented the Google patent, “Method of identifying an electronic device by browser versions and cookie scheduling” which was issued in March 2015.

Joyce Zhu interned at The Zuckerberg Institute of Water Research in the Jacob Blaustein Institutes for Desert Research at the Ben-Gurion University of the Negev with Professor Christopher Arnusch in 2013. Joyce co-authored the article “A microbiology-based assay for quantification of bacterial early stage biofilm formation on reverse-osmosis and nanofiltration membranes” in the journal Separation and Purification Technology in 2015.

Michelle Dutt interned at The Zuckerberg Institute of Water Research in the Jacob Blaustein Institutes for Desert Research at the Ben-Gurion University of the Negev with Professor Osnat Gillor in 2013. Michelle co-authored the article “Rapid MPN-Qpcr Screening for Pathogens in Air, Soil, Water, and Agricultural Produce” in the journal Water, Air, & Soil Pollution in August 2015.

Richard Lu took his 2014 summer internship with Cellepathy one step further, and continued to work as an independent contractor for them over the 2014-2015 school year. He contributed to developing their Android application, Verify. Because of his internship, Richard reflects that “mobile software development is now a viable career path for me.”

Suri Bandler, 2014 summer intern at the Weizmann Institute of Technology working with Professor Eran Segal, returned to campus and served as the StandWithUs Emerson Fellow in 2014-2015 and Vice President of the MIT Friends of Israel group. In the 2015-2016 academic year, Suri will serve as the CAMERA On Campus Fellow in 2015-2016. Suri returned to Israel in the summer of 2015 to work at Akamai.
MIT-Israel Alumni Stories

Each year, we are impressed with what our interns can accomplish in just a few months—students are published in major journals, present their work at conferences, and make significant contributions to their hosts—in addition to gaining skills like global workplace competency, independence and broader cultural understanding. Some students go above and beyond even these already impressive accomplishments, and only two of many stories are highlighted here.

Joanna Chen
Class of 2015 · Materials Science and Engineering
MIT-Israel Internship 2013 – Bar Ilan University
MIT-Israel Israel Security Seminar 2015

Joanna was drawn to Israel for her 2013 summer internship. Beyond gaining great professional experience, she wanted to push herself outside her comfort zone and completely immerse herself in a new place. She was drawn to Israel for the rich culture, history and people just as much as the world-class research opportunities offered by the Institute for Nanotechnology and Advanced Materials Lab at Bar Ilan University in Ramat Gan. Joanna returned to Israel for a second time in the spring of 2015 to participate in the first ever ROTC Israel Security Seminar.

During her internship, Joanna worked with MISTI and MIT alumnus Dr. Daniel Nissim, Dr. Yaakov Tischler and PhD student Merav Muallem to create highly reflective cavities to confine specific wavelengths of light by building micro-cavities through thermal evaporation. In the process, she developed her own experiments and became an expert in using the thermal evaporator. She ultimately succeeded in building distributed Bragg reflectors, a crucial step for incorporating in high-reflective micro-cavities.

What Joanna learned extended far beyond thermal evaporation. She reflected that she also gained problem solving skills, resilience and hands-on professional experience. Beyond her accomplishments in the lab, Joanna reflected that “the skills I developed [during my internship have] helped me since, and I’m confident they will continue to help me wherever I may go, as I adapt to each new situation I’m in and interact with different people.”

Outside of work, Joanna jumped at the chance to explore the wide array of sights, sounds, and experiences that Israel has to offer. She recalls how she saw everything “from beaches to deserts, ancient ruins to Tel Aviv, churches to museums, [and] always learned something new…I was able to explore different cities and food, meet different people, and had a lot of fun doing it.”

After her engaging summer, Joanna knew she wanted to return to Israel someday. As a member of the the MIT ROTC program, Joanna jumped at the chance to return upon hearing about the Israel Security Seminar pilot trip over spring break. The trip had the “added promise of enlightenment in an area that pertained greatly to my future profession” for Joanna as a future naval officer, “but more importantly, as a future leader and simply a citizen of the world.” She reflected on the importance of learning about
Israel, and all the learning opportunities that it has to offer: about complex geopolitical issues, how the IDF functions and determines security postures, and how the US and Israel interact on a military level.

Reflecting on the entirety of her experiences with Israel as an undergraduate, Joanna eloquently reflected: “Despite previously taking a history course on the Israel- Palestine conflict, spending almost 3 months in Israel, and reading the news, I feel that it was this trip that truly gave me a better insight into understanding Israelis—the ways history has affected how Jews as a people reason and act, and how Israel as a nation carries out national policy.”

“Through walking the streets of the Old City in Jerusalem, visiting Yad Vashem, speaking to lone soldiers, IDF officers, and journalists, I was able to put myself in the shoes of a people who have gone through unfathomable hardship, but are profoundly resilient, determined and optimistic. Israelis are not individual citizens of a nation—they are vibrant pieces of a greater body that started with the Israelites of the Bible and now span the globe, carrying with them a deep sense of unity and purpose that transcends time and space. More than that, they are what we all are: people. People who laugh and learn, enjoy good food, striking conversation and music; I will take with me the reminder that there’s always another side to any story, and it’s most likely very complicated—but more importantly, each person involved is exactly that—another person, more than the circumstances they are in—just like me.”

Josh Blum
Masters of Engineering Candidate ∙ Electrical Engineering & Computer Science
MIT-Israel Internship 2011 – Ben-Gurion University of the Negev
MIT-Israel Internship 2015 – Technion – Israel Institute of Technology
MISTI MIT-MEET 2015

Almost four years after his first MISTI MIT-Israel experience, Josh Blum packed his bags and headed to Israel again. As a freshman in the summer of 2011, Josh interned at Ben-Gurion University of the Negev with Professor Eran Sher. As a current graduate student in Electrical Engineering and Computer Science, he reflected on the positive impact his initial MISTI experience had on his first years at MIT. As he approached a big decision—graduate school or entering the workforce—Josh took the time to explore and work in Israel once again, interning at the Technion – Israel Institute of Technology with Professor Mark Silberberg.

Josh wanted to return to Israel for another experience abroad, a chance to experience graduate student life at a foreign university and to travel in the region. At the Technion, Josh was able to conduct research related to his Masters of Engineering thesis, and also was able to take a GPU systems class and Hebrew language instruction. Josh’s research focused on building tools to compute and explore on
large data sets, so that ultimately doctors can be able to visualize and classify patient data from EEG scans.

Over the course of his five-month internship, Josh published a paper, “Opportunities and Challenges Around a Tool for Social and Public Web Activity Tracking” which he will present at the 2016 Computer-Supported Cooperative Work and Social Computing Conference. Beyond his professional outcomes, he also reflected that he was able to make a large network of international friends, participate in a diverse array of outdoor activities, and explore different parts of the country, truly experiencing Israel, reflecting that “[Israel is] similar to America in that it’s a melting pot and the people are very driven to succeed.”

After completing his internship, Josh participated in another MISTI program, MISTI MIT-MEET (Middle Eastern Entrepreneurs of Tomorrow) where he taught computer science to Israeli and Palestinian high school students in Jerusalem. From this, he learned that “I really love teaching computer science and I wanted to have an impact on young students as they decide what they want to study in college. [I most enjoyed] interacting with the students and being able to give them advice beyond the CS material or sharing my work experiences with them.”

Josh returned to MIT in the fall of 2015 to continue his EECS studies as an MEng candidate.
VIII. In-Country Seminar

The interns had the opportunity to go beyond their offices and labs for five days to participate in the “MISTI MIT-Israel Seminar for Global Leadership: Israeli Society, Culture and Technology,” and develop a wider and deeper perspective of the country.

Primary goals included:
- Introducing students to Israeli politics, society, and technology, and their impact on Israel and Israeli behavior
- Giving students the understanding of the context and culture of Israeli society, and how it impacts the workplace in order to support them in their future global careers

Subgoals included:
- Touring important sites in Israel
- Encouraging relationships and interactions with Israelis
- Learning from high-level, exceptional Israeli leaders
- Learning about the Israeli Tech sector

<table>
<thead>
<tr>
<th>Day One</th>
<th>Day Two</th>
<th>Day Three</th>
<th>Day Four</th>
<th>Day Five</th>
<th>Day Six</th>
</tr>
</thead>
<tbody>
<tr>
<td>◦ Welcome and Introductions at Moshav Neve Ilan</td>
<td>◦ Guided tour of Yad Vashem, Israel’s National Holocaust Museum ◦ Dr. Rachel Korazim: “Impact of the Holocaust on Israeli Society” ◦ Meeting with Forum of Bereaved Parents ◦ Visit to Kibbutz Megiddo ◦ Ehud Manor concert at Shuni Amphitheater</td>
<td>◦ Tour of Crusader fortress in Yehiam and an overview of the War of Independence in 1948 ◦ Tour of Tzfat, lecture from an Israeli artist, and free time in the Artists’ Quarter ◦ Shabbat dinner and evening activity</td>
<td>◦ Free time/visits to local synagogues or churches ◦ Beach time ◦ Tour of Kibbutz Degania Bet ◦ Session “Overcoming Workplace Obstacles” ◦ Free evening in Tiberias</td>
<td>◦ Tour of Mekorot-Sapir Water Facility ◦ Druze hospitality and lunch in Peki’in ◦ Meeting with Dr. Eran Feldhay, CEO of Trendlines ◦ Meeting with Iman Kaddah in Arab Israeli village Majd El Krum ◦ Session: “My Internships: Aims and How to Get There”</td>
<td>◦ Tour of Golan Heights, understanding its history and strategic importance to Israel ◦ Meeting with IDF 188th Armored Brigade personnel about geo-politics ◦ Rafting at Kfar Blum ◦ Closing activity and evaluations</td>
</tr>
</tbody>
</table>

Student Comments about the Seminar

“I appreciated meeting with actual Israelis, especially from minority communities and members of Israeli military and high-tech sectors”

“I will share my experience with my community and recommend that people go to Israel”

“I enjoyed making friends with MIT people and learning things together with them”

“I will definitely tell family and friends about what I learned in this experience, and I also feel that it has helped to broaden my worldview, which is something that will affect many parts of my life”

“The best parts of the trip were learning the different perspectives from so many walks of Israeli life. I loved learning about these people, and I think those were the most meaningful parts of the trip”
MIT-Israel 2014-2015
IX. Additional In-Country Activities

MISTI MIT-Israel/Hillel Tech Trip for MIT Students in Israel

Even after ten days of non-stop Israeli exploration on MIT’s Taglit-Birthright Israel trip, seven MIT undergraduates hadn’t experienced enough Israel! The morning after Birthright ended, the students boarded another bus to continue their dive into Israel on the MISTI MIT-Israel/Hillel Tech Trip (organized by MIT Hillel in collaboration with MISTI MIT-Israel.)

Students were able to visit six tech companies: Check Point Software Technologies, VoiceItt, OrCam, Siftech, Mellanox Technologies and Pluristem Therapeutics. Students also toured three labs at the Weizmann Institute of Technology and the IDF’s only chemical synthesis lab. At the Weizmann Institute, students visited the labs of Dr. Harry Greenblatt, Associate Staff Scientist at the Department of Structural Biology; Professor Deborah Fass, MIT alumna of the Structural Biology Department; and Professor Yohai Kaspi, MIT alum of the Department of Earth and Planetary Sciences.

Other highlights included cultural sites, an extensive tour of Jerusalem, and home hospitality. Special thanks to Mr. and Mrs. David A. Polak ’59 for supporting this initiative.

Students were greatly affected by the extension and reflected:

“I loved seeing these companies because they exemplified what it meant to use technology to improve the lives of others. Also the people we met with were...go-getters that were working on projects they believed...Going back to campus I will feel empowered to look for projects and companies that are making a difference. I also now know about what sorts of companies are based in Israel and am proud that they are dealing with such meaningful projects.

Thank you so much for making these opportunities a reality. I am so appreciative of being able to maximize my time in Israel by getting a first hand, insider look at the Start-up Nation!”

Tally Portnoi, Tech Trip Participant and MIT-Israel Intern
Class of 2017, Electrical Engineering and Computer Science

“While I have known that Israel has a prolific tech industry, I was unaware until this experience of how diverse and extensive that industry is. These company visits--even the ones not directly related to my fields of interest--have given me important insight into my options both in Israel and the scientific world at large.”

Lauren Rotkovitz, Tech Trip Participant
Class of 2017, Chemical Engineering
MIT-Israel Israel Security Seminar

Twenty-two MIT ROTC students landed in Tel Aviv in March 2015 to participate in a groundbreaking new seminar planned by the student group aimed at exposing future US military officers to Israel. The undergraduate and graduate students spent eight days of spring break touring and exploring Israel. Students gained new perspectives on Israel and military service, the special US-Israel security relationship, leadership and civil-military integration.

With a former high-ranking IDF officer as their guide, this diverse group visited two IDF bases and experienced numerous mifgashim (encounters) with current and former IDF soldiers. While students cited many differences between the US and Israeli militaries, it became apparent that the similarities outweighed the differences.

The trip was the first time in Israel for the majority of the students. Many reflected that this experience exposed them to Israel’s culture, people and history, and allowed them to reflect on their own military experiences. Bridget McCoy, Aeronautics and Astronautics ’15, wrote that: “[The trip] definitely made me think outside the box about leadership, and reflect on how I can adapt my leadership style if necessary. I’m not sure that either the Israeli or U.S. model is better, but it has been a good exercise for me to analyze both, rather than taking either one for granted.”

The highlights of the trip included both key sites (Jerusalem, Yad Vashem, Har Herzl, and Masada) and incorporated unique Israel engagement experiences like rappelling with American-Israeli former lone soldiers; an overnight survival hike; a meeting with IDF Intelligence Unit 8200 officers; special visits to high-tech companies; and a media panel with Saul Singer, co-author of Start-Up Nation, David Horowitz, founding chief and editor of the Times of Israel, and Israeli-Canadian journalist and author Matti Friedman.

Many participants reflected that the trip was “inspiring,” “an incredible experience,” and they couldn’t “wait to go back to Israel” as well as “share what they learned with peers, friends and family.”

MISTI MIT-Israel Security Seminar organized in affiliation with several local organizations (including MIT Hillel and the MIT ROTC.)

Selected Student Reflections:

“There are no words to express how truly thankful I am for this opportunity. The generous support we received for this trip has created priceless returns for us both as future military leaders and as citizens of the world. I will forever hold this experience dear to me, and I will continue to strengthen my knowledge and support of Israel throughout my life.”

Carolena Ruprecht, Nuclear Science and Engineering, Class of 2016
“Hearing from IDF officers about how they interact with subordinates has allowed me to further develop my personal leadership model and should allow me to help promote critical thinking and creative problem solving within a military structure which often does not promote creativity and critical thinking... As I return to the United States I plan to do my best to share my experiences and lessons learned with my colleagues in ROTC, friends at MIT, and eventually co-workers in Air Force once I enter Active Duty service. I hope to do my part to spread awareness and develop support for one of the United States closest allies and strategic partners in the world.”

Martin York, Aeronautics and Astronautics, Class of 2017

**Globes Conference**

In December 2014, MISTI MIT-Israel Program Manager David Dolev and Professor Yasheng Huang, Associate Dean, Professor of International Management Sloan School of Management and MISTI MIT-China Faculty Director, travelled to Israel for the Globes Israel Business Conference. The conference, which collaborates with the World Economic Forum, MIT, INSEAD and the Milken Institute, brought together over 4,000 international participants to hear from global leaders, scholars, executives and diplomats. Professor Huang was one of the featured speakers on the panel “China has tea and cottage cheese,” about the significance and consequences of the increased interest of China in Israeli companies.
X. MISTI Global Seed Funds

The MISTI Global Seed Funds promote and support early-stage collaboration between MIT faculty and their international counterparts. Many of the joint projects lead to additional grant awards and the development of valuable long-term relationships between international researchers and MIT faculty, who are encouraged to involve MIT students as part of their projects.

<table>
<thead>
<tr>
<th>Name of Project</th>
<th>Faculty Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Self-Sustained Agriculture Based on Marginal Water”</td>
<td>Professor John Lienhard (MIT), Assistant Professor Amos Winter (MIT), Professor Jack Gilron (BGU), Dr. Naftali Lazarovitch (BGU), Professor David Faiman (BGU), and Professor Eilon Adar (BGU)</td>
</tr>
<tr>
<td>“Improving the Delivery of Treatments in Spinal Cord Injury Using Ultrasound”</td>
<td>Professor Robert Langer (MIT), Timothy O’Shea (MIT), and Dean Joseph (Yosi) Kost (BGU)</td>
</tr>
<tr>
<td>“Identification of Epigenetic Quantitative Trait Loci Associated with Tomato Seed Germination”</td>
<td>Assistant Professor Mary Gehring (MIT), and Assistant Professor Aaron Fait (BGU)</td>
</tr>
<tr>
<td>“Guiding Students’ Learning Using On-line Collaborative Annotation Tools”</td>
<td>Professor David Karger (MIT) and Senior Lecturer Yakov (Kobi) Gal (BGU)</td>
</tr>
<tr>
<td>“Channel Photocurrent Spectroscopy – Characterization Tool for Heterostructure Transistors”</td>
<td>Professor Jesus A. del Alamo (MIT), and Assistant Professor Ilan Shalish (BGU)</td>
</tr>
</tbody>
</table>

MIT-Israel – Ben-Gurion University of the Negev Seed Fund

The Ben-Gurion University of the Negev Seed Fund, established in spring 2014, funded five projects between MIT faculty and partners at Ben-Gurion University, who will work together from January 2015 until August 2016. Award winners are shown on the left.

MIT-Israel Seed Fund Launched

In 2015, the MIT-Israel Seed Fund was launched, which will allow for collaboration between MIT faculty and their Israeli counterparts at any university in the country. This launch was triggered by the extensive interest of MIT faculty to collaborate with Israeli scientists. As of September 2015, MISTI has received 35 proposals for this new Seed Fund.
XI. Events

This past year we sponsored or co-sponsored 14 Israel-related events on the MIT campus. Below are a few of the highlights.

**SpaceIL**

*Sponsored by: MISTI MIT-Israel, Sloan Israel Business Club, Sloan Astronautics and Space Industry Club, and MIT Women’s Graduate Association of Aeronautics and Astronautics*

Land a spacecraft on the surface on the moon, move the craft 500 meters, and transmit a “moon selfie” to Earth—these objectives are all in a day’s work for Israeli non-profit, SpaceIL, who aims to take the Google Lunar XPrize Grand Prize and land the first Israeli spacecraft on the moon. On May 13, SpaceIL co-founder Yonatan Winetraub spoke to a group of undergraduate and Sloan students about the twofold goals of the organization: take the grand prize, and create an Israeli “Apollo Effect” to inspire the next generation of Israeli scientists and engineers.

Already having captured the imagination of the Israeli public, Yonatan had the rapt attention of the crowd. His lecture combined the science of landing on the moon, stories of facilitating the large-scale exposure of children to science and technology education, and his demonstration of Israeli spirit and leadership in tackling seemingly-impossible problems.

**Mindsharing: The Art of Crowd Sourcing Everything with author Lior Zoref**

*Sponsored by: MISTI MIT-Israel, MIT Media Lab, Sloan Israeli Business Club, and the Israeli Student Association*

How can we use the power of social media and large crowds to upgrade our brains, thinking and lives? Lior Zoref, former Microsoft marketing vice president, TED Talk speaker and author of “Mindsharing: The Art of Crowd Sourcing Everything” explained how to use technology to tap into a collective wisdom that has the power to transform every aspect of our lives from finance to romance to family to career in his lecture at the MIT Media Lab.

**Haifa & Boston Tech Webinars Seminars**

Cambridge, Massachusetts and Haifa, Israel may be 5,458 miles apart, but entrepreneurs on each side of the globe participated in the Haifa & Boston Tech Webinars project, aimed at assisting entrepreneurs through information activities and creating opportunities to boost their professional growth. Webinars included session such as “Gamification for your Start-Up” from Yaniv Corem, MIT alum (SM ’10) about utilizing gamification to improve startups’ interactive engagement strategies; “10 Essential Tools to Market Your Start-Up” featuring CMO of leading online business presentation software emaze and start-up advisor, Daniel Glickman; and “Build Habit-Forming Products” with Nir Eyal, author of “Hooked: How to Build Habit-Forming Products.” Webinars were open to MIT students and their counterparts in Israel.
XII. Evaluation and Future Plans

The goals of the MISTI MIT-Israel Program for the upcoming year include the following (pending funding): raising endowment funds to secure the program in perpetuity; developing more interactive educational modules in order to enhance students Israel-experience (before, during and after the internship); increasing the number of company internships in line with student demand (architecture, biotech, water, cyber security); and exploring possible additional faculty and student short-term Israel educational seminars.

Evaluation is crucial to the continued improvement and development of the program. Students’ feedback, suggestions and assessments were sought throughout the process through surveys, small group meetings in Israel, reports and projects, and a post-internship reentry session. Israeli hosts were asked for their feedback via a mid-internship survey and completed a survey at the conclusion of the internship. Students and hosts alike were very positive and viewed the experience as mutually beneficial, commenting on the personal and professional growth of the interns.

Based on the evaluations, the following improvements will be explored:

Preparation
- The majority of students found the MIT-Israel trainings to be helpful in preparing them to live and work in Israel. Students commented that it would be helpful to have additional logistical training. Additional information about “everyday minutia” will be added to the Israel-specific Wiki page and a logistics manual will be given to students during training.
- To encourage students to more deeply interact with the environment around them, the MISTI MIT-Israel Hebrew language curriculum will continue to be developed through collaboration with Israel at the Center to better prepare students for workplace and recreational vocabulary.

In-Country Practical Challenges
- Finding housing for students in Tel Aviv continues to be a challenge, as do in-country travel restrictions (as per US State Department guidelines). We aim to ensure that as many students as possible can live close to their host sites, and when not possible they will love close to MIT-approved public transportation. As lodging and living conditions in Israel can differ from what some students are used to, we will continue to dedicate training time to explain housing in Israel.

Internships
- As in past years, a mid-internship survey was conducted to alert MIT-Israel to any issues which may have arisen during the first half of the internship. We will continue to emphasize pre-internship communication between the students and their hosts to clearly outline how students should prepare, expectations, and projects, and regular check-ins between students and their supervisors during the internship.

87% of Israeli supervisors rated MIT-Israel interns knowledge of Israeli culture as “Good” or “Excellent”

100% of students felt prepared to function in Israel’s culture and society
XIII. Host Companies and Institutions

Our list of participating companies and institutions that are willing to host MIT students is continuously growing and currently includes the following (partial list):

<table>
<thead>
<tr>
<th>Company</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ai.type</td>
<td>ai.type develops smart input software with advanced context aware, cloud based features. aitype’s Android Keyboard enables next word prediction, completion, correction, spelling and grammar check as you type.</td>
</tr>
<tr>
<td>Amal Network</td>
<td>Amal is a nationwide network of educational institutions engaged in the advancement of comprehensive and technological education.</td>
</tr>
<tr>
<td>Amdocs</td>
<td>Amdocs provides customer care, billing, and order management systems for telecommunications carriers and Internet service providers.</td>
</tr>
<tr>
<td>Asquith Israel Merchant Bank</td>
<td>Asquith Israel invests in and supports selected Israeli growth companies with two core goals – a healthy return for investors, and driving Israel’s next phase of development.</td>
</tr>
<tr>
<td>Asymmetric Medical</td>
<td>Asymmetric Medical is a medical device startup developing unique surgical tools based on a revolutionary fiber design enabling intuitive, precise, and low energy surgery.</td>
</tr>
<tr>
<td>Bank of Israel</td>
<td>The Bank of Israel is the central bank of the State of Israel.</td>
</tr>
<tr>
<td>Bar Ilan University</td>
<td>Beam Riders is a media and technology company developing a new genre of apps and games to encourage children’s’ soft skills worldwide.</td>
</tr>
<tr>
<td>Ben-Gurion University of the Negev</td>
<td>Big Idea is an international technology summer camp in Israel from the creators of eCamp for children and teens ages 7-18.</td>
</tr>
<tr>
<td>Bloomfield Science Museum Jerusalem</td>
<td>The Bloomfield Science Museum Jerusalem is an informal cultural and educational institution that presents exhibitions consisting of interactive exhibits on subjects of science and technology.</td>
</tr>
<tr>
<td>BrightSource Energy</td>
<td>BrightSource Energy’s mission is to make solar energy cost-competitive with fossil fuels by developing, building, owning, and operating the world’s most cost-effective and reliable large-scale solar energy projects.</td>
</tr>
<tr>
<td>Company</td>
<td>Description</td>
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</tr>
<tr>
<td>BT9 Ltd.</td>
<td>BT9 is an end-to-end, real-time cold chain management (CCM) solution provider.</td>
</tr>
<tr>
<td>Cellepathy</td>
<td>Cellepathy is pioneering the field of Context-Based Services using data from the accelerometers, gyroscopes, and other sensors on smartphones and tablets to power innovative, algorithmic solutions to real-world problems.</td>
</tr>
<tr>
<td>Check Point Software Technologies</td>
<td>Check Point Software Technologies Ltd. is an international provider of software and combined hardware and software products for IT security, including network security, endpoint security, data security and security management.</td>
</tr>
<tr>
<td>Consumer Physics</td>
<td>Consumer Physics builds a pocket spectrometer for smartphones, enabling a variety of consumer apps.</td>
</tr>
<tr>
<td>The Ecological Greenhouse at Kibbutz Ein-Shemer</td>
<td>The Ecological is an innovative educational center, a place for social encounters and connection which combines two fundamental elements: environmental ecology and social ecology.</td>
</tr>
<tr>
<td>Endospan Ltd</td>
<td>Endospan transforms the treatment of aneurysms, dissections and aortic lesions from high-risk, open-surgery to faster, simpler and less invasive procedures.</td>
</tr>
<tr>
<td>Genome Compiler</td>
<td>Genome Compiler provides an intuitive all-in-one software platform for genetic engineers, molecular and synthetic biologists. We supply a comprehensive set of tools for DNA design &amp; visualization, data management and collaboration.</td>
</tr>
<tr>
<td>Gizmo Engineering</td>
<td>GizmoMaker.com is a full-service engineering firm, specializing in working with inventors and start-ups to make their inventions and product dreams come true.</td>
</tr>
<tr>
<td>Google</td>
<td>In Israel, Google is committed to focusing on Israeli web surfers, advertisers, and website operators, in addition to developing their worldwide operations.</td>
</tr>
<tr>
<td>Hachiko</td>
<td>At Hachiko we are building the next smart collar for dogs that helps dog parents to live better life while raising their dog in the city.</td>
</tr>
<tr>
<td>Hebrew University of Jerusalem</td>
<td></td>
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<tr>
<td>Hewlett Packard – Indigo Division</td>
<td>IPG division is in graphic solutions business division that serves the diverse needs of the world of design and printing.</td>
</tr>
<tr>
<td>Company Name</td>
<td>Description</td>
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<tr>
<td>IBM</td>
<td>The IBM R&amp;D Labs in Israel serve as an umbrella organization for the Haifa Research Lab, the IBM Israel Systems and Technology Group Lab, and the IBM Israel Software Lab.</td>
</tr>
<tr>
<td>IDC Herzliya - miLab</td>
<td>The Media Innovation Lab at IDC Herzliya is a research, learning, and prototyping space that explores the future of media, technology, and human-computer interaction.</td>
</tr>
<tr>
<td>IDE Technologies</td>
<td>IDE provides water solutions for industrial and domestic applications worldwide.</td>
</tr>
<tr>
<td>Infinidat</td>
<td>Infinidat is a start-up involved in hardware and software in the field of computerized data storage.</td>
</tr>
<tr>
<td>Intel</td>
<td>Intel is developing small, fast, and energy-efficient technologies to help create the next revolutionary step in mobile, desktop, and data center computing — as well as technologies that power the engine of change for our entire industry.</td>
</tr>
<tr>
<td>International Conservation Center/Israel Antiquities Society</td>
<td>The Center aims to provide training in conservation, serve as a place of study for researchers and students, and develop new public and community programs that target all tangible and intangible heritage values of the city.</td>
</tr>
<tr>
<td>Keter Plastic</td>
<td>Keter Plastic is one of the world’s leading manufacturers and marketers of resin-based household and garden consumer products.</td>
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<tr>
<td>The Knesset</td>
<td>The Knesset is the national legislature of the government of the State of Israel</td>
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<tr>
<td>Medimor</td>
<td>Medimor strives to simplify your operational requirements by providing in-house solutions for major manufacturing processes for medical devices.</td>
</tr>
<tr>
<td>Mekorot</td>
<td>Mekorot is the national water company of Israel and the country’s top agency for water management. Mekorot is a world leader in desalination, water reclamation, water project engineering, water safety and water quality.</td>
</tr>
<tr>
<td>Mellanox Technologies, LTD</td>
<td>Mellanox is a leading supplier of end-to-end Infiniband and Ethernet interconnect solutions and services for servers and storage.</td>
</tr>
<tr>
<td>Netafim</td>
<td>Netafim is the global leader in smart drip and micro-irrigation solutions since introducing the world’s first drip irrigation system solutions in 1965.</td>
</tr>
<tr>
<td>Company Name</td>
<td>Description</td>
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<tr>
<td><strong>OrbiMed Advisors</strong></td>
<td>From biopharmaceuticals to medical devices, diagnostics, and healthcare services, OrbiMed is scouting the globe for innovations that will help ensure humanity lives healthier, longer, and more productive lives.</td>
</tr>
<tr>
<td><strong>Orbotech</strong></td>
<td>Orbotech designs, develops, manufactures, markets, and services automated optical inspection (AOI) systems for bare PCBs, FPDs, and imaging solutions for PCB production.</td>
</tr>
<tr>
<td><strong>ORT Braude College</strong></td>
<td></td>
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<tr>
<td><strong>ORT/Israel Sci-Tech Schools Network</strong></td>
<td>Israel Sci-Tech Schools are an educational network of comprehensive schools in Israel, specializing in the high-tech and science fields and in instilling knowledge, skills, and values in their pupils.</td>
</tr>
<tr>
<td><strong>Palantir Technologies</strong></td>
<td>Palantir builds data fusion platforms for integrating, managing, and securing any kind of data, at massive scale, and layers applications for fully interactive, human-driven, machine-assisted analysis.</td>
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<tr>
<td><strong>Preen.me</strong></td>
<td>Find new beauty inspiration every day with gorgeous looks you can recreate. Preen.Me gives you detailed how-tos and the products used.</td>
</tr>
<tr>
<td><strong>Prep4GMAT</strong></td>
<td>Prep4GMAT is the first comprehensive mobile study app that personalizes GMAT preparation</td>
</tr>
<tr>
<td><strong>Protalix Biopharmaceutical</strong></td>
<td>Protalix is a biopharmaceutical company focused on the development and commercialization of recombinant therapeutic proteins based on their proprietary ProCellEx protein expression system.</td>
</tr>
<tr>
<td><strong>Rainbow Medical</strong></td>
<td>Rainbow Medical generates exceptional returns for its investors by establishing companies that create unique medical device solutions addressing today's most urgent, unmet, market needs.</td>
</tr>
<tr>
<td><strong>Rambam Health Care Campus</strong></td>
<td>Rambam Health Care Campus is northern Israel's largest hospital and a tertiary referral center for 11 district hospitals and the north's address for advanced surgical departments in all specialties and subspecialties.</td>
</tr>
<tr>
<td><strong>Sledgehammer Management</strong></td>
<td>Founded in late 2008, Sledgehammer exclusively represents Rutledge from Singapore, in finding businesses in Israel that have potential for investments and cooperation.</td>
</tr>
<tr>
<td><strong>Spoteam.com</strong></td>
<td>Spoteam is a B2C platform for mobile, web and smart TV that allows users to watch a daily digest of the best videos on the web, tailored to their personal preferences.</td>
</tr>
<tr>
<td>Technion - Israel Institute of Technology</td>
<td>Tel Aviv University</td>
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<td><img src="image1" alt="Technion Logo" /></td>
<td><img src="image2" alt="Tel Aviv University Logo" /></td>
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Teva specializes in the development, production and marketing of generic and proprietary branded pharmaceuticals, as well as active pharmaceutical ingredients.

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<th>Voiceitt</th>
<th>Weizmann Institute of Science</th>
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<td><img src="image4" alt="Voiceitt Logo" /></td>
<td><img src="image5" alt="Weizmann Institute Logo" /></td>
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</table>

The mission of Voiceitt is to create innovative solutions that help aid the lives of people with disabilities by fostering independence and social inclusion and thus dramatically improving their quality of life.
XIV. Donors Acknowledgements

We are thankful to the many major donors who have helped us launch and continue to grow the program and to the many annual fund supporters who are too numerous to be listed below.

- Mr. Jack A. Belz ’48
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- Jay (’77) and Shoshana Dweck Foundation
- Fisher Family Foundation (Ron Fisher and Lisa Rosenbaum ’77)
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- Lionel C. Kimerling, Thomas Lord Professor, Department of Materials Science and Engineering
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- The Kogan Family
- Robert and Myra Kraft Family Foundation
- Mr. and Mrs. Mason I. Lappin
- Rebecca and Laird M. Malamed ’89
- Mr. and Mrs. David A. Polak ’59
- Arthur Reidel BS ’73
- Janice Rossbach ’51
- Mr. Paul H Rothschild ’58
- Dr. Marc Rudoltz ’85 and Dr. Lisa Hochman
- Edward M. (’59) and Harriet Safran
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- Mr. Philip J. Solondz ’48
- Ann and Rick (’70) Tavan
- Arnee R. and Walt A. Winshall ’64
XV. Further Acknowledgements

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• The American Technion Society: Joel Berkowitz and Ruth Gold

• David Goodtree, Massachusetts – Israel Innovation Partnership
XVI. References

The MIT-Israel Program was founded in 2008 and continues to grow.

16 ACADEMIC DEPARTMENTS
   In 2014-2015

110 HOSTS
   Current & past host institutions

109 EVENTS
   On campus

400 INTERNS
   2008 - 2015