

MISTI
MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT)
INTERNATIONAL SCIENCE AND TECHNOLOGY INITIATIVES

MIT-ISRAEL PROGRAM 2008

[HTTP://MIT.EDU/MISTI/MIT-ISRAEL/](http://mit.edu/misti/mit-israel/)

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COLLABORATING ORGANIZATIONS



**MIT Club
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Boston-Haifa Life Sciences Initiative (BHLSI)

Technion
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בן-גוריון בנגב**
Ben-Gurion University
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MIT-Israel Program 2008

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MIT International Science and Technology Initiatives (MISTI) MIT-Israel Program 2008: Summary

The MIT-Israel Program is a **cross-disciplinary student research and exchange program whose goal is to create scientific, intellectual, and cultural bridges between the United States and Israel**. The MIT-Israel program involves training and sending MIT students at all academic levels to work at universities and companies in Israel for extended periods of time (typically ~12 weeks). All expenses are paid for the participating students. MIT-Israel also sponsors seminars and short courses on Israel on the MIT campus. **MIT-Israel allows a broad cross-section of MIT students to build a meaningful understanding of Israel and deep local relationships, as well as gain an outstanding technical and cultural experience.**

In the summer of 2008, **15 MIT students from Eleven Different academic Departments** (i.e. Civil and Environmental Engineering, Mechanical Engineering, Brain and Cognitive Science, Physics, Electrical Engineering and Computer Science, Architecture, Political Science, Chemistry, Biology, Mathematics, Management) departed for three month long summer internships in Israel. The 2008 class of students was exceedingly diverse from different academic levels (1 B.S. alumni, 3 recent B.S. graduates, 5 juniors, 2 sophomores, and 4 freshmen) and ethnic backgrounds. Students from this years class have been placed in a variety of locations studying the following fields ; Ben Gurion University (2 students): solar energy, multispectral target detection, Technion - Israel Institute of Technology (4 students): structural and civil engineering, autism/behavioral science, hyperspectral imaging, The Weizmann Institute of Science (2 students): ribosome structure and function, functional organic systems, Tel Aviv University (1 student): nanoseismic monitoring, Tel Aviv Municipality (1 student): conservation - building restoration, Shatil-Haifa (1 student): planning multicultural cities, Checkpoint (2 students): enhancing software capabilities, Hebrew University of Jerusalem (1 student): genetically engineered tissues, Google Tel Aviv (1 Student). BGU, Weizmann, Technion, TAU, Checkpoint, and Google Tel Aviv, have made significant financial and administrative contributions to the cost of hosting MIT students on their campuses.



Over the course of 8 weeks, MIT-Israel students took a new six credit course entitled **"Israel: History, Culture and Identity"** to give them a basic understanding of modern Israel through lectures, discussions and projects. This class provides insight into modern Israeli politics, culture and identity. The MIT-Israel students also took part in preparatory training sessions during May, 2008, met with Israeli students on campus, and took part in a seminar led by Rony Yedidia, Consul of Israel at the Consulate General of Israel to New England. This seminar was entitled **"Israel at 60: Technology, Politics, and the Israeli Psyche."**

Throughout the upcoming 2008-2009 year, the focus will be on fund-raising in collaboration with the MIT Office of Leadership and Giving, student recruitment, the formation of new relationships and the strengthening of existing collaborative ties with host universities and companies, the development of new sub-programmatic activities and, pending the availability of additional funding, the creation of MIT-Israel Collaborative Research Seed Fund to initiate and support scientific collaborations between MIT and Israeli scientists/faculty in critical areas (e.g. defense, stem cell research and tissue engineering, high resolution microscopy, nanotechnology, energy, etc.). • all with the ultimate goal of increasing the visibility and expanding the broader impact of the program.

The **MIT-Israel Program** is a cross-disciplinary student research and exchange program whose goal is to create scientific, intellectual, and cultural bridges between the United States and Israel.



The MIT-Israel program involves training and sending MIT students at all academic levels to work at universities and companies in Israel for extended periods of time (typically ~12 weeks). All expenses are paid for the participating students. MIT-Israel also sponsors seminars and short courses on Israel on the MIT campus, as well as supports the initiation and strengthening of scientific collaborations between MIT and Israeli scientists in critical areas (e.g. defense, stem cell research and tissue engineering, high resolution microscopy, nanotechnology, energy, etc.). MIT-Israel allows a broad cross-section of MIT students to build a meaningful understanding of Israel and deep local relationships, as well as gain an outstanding technical and cultural experience.

The *MIT-Israel* program is part of the **MISTI** organization (MIT International Science and Technology Initiatives, <http://web.mit.edu/misti/index.html>) which includes eight other countries (China, Japan, India, Germany, Italy, France, Spain, Mexico). The MISTI organization is 20 years old and has sent over 2000 MIT students abroad.

"The goal of MISTI is to internationalize MIT education and research to prepare students for leadership in careers that go beyond national boundaries

by pursuing and utilizing cutting-edge knowledge from around the world. MISTI is dedicated to providing a wide range of practical and challenging experiences that introduce MIT technology, science, and management students and faculty to today's global world of R&D, manufacturing, and sales. MISTI prepares students in foreign languages, history, culture, and global issues at MIT, culminating in an ever-expanding array of hands-on research and projects. Most include internships, international research collaborations, and public education seminars that serve to maintain close on-going cooperation with sponsor corporations to help them capitalize on global opportunities by accessing the MIT community and hiring MIT/MISTI talent. All programs are open to undergraduates, graduates, and recent alumni from all areas of study." - MISTI Office Pamphlet.

MIT-Israel Summary of Activities / Timeline

FY 2007 - 2008

June, 2007 : MIT- Israel Dinner for interested MIT faculty, staff, and collaborators yielded great interest and support in developing the program. Attendees included; Haim Alcalay - MIT Club of Israel President, EECS '61, President, APA Advanced Technologies, Diane Davis – Associate Dean MIT School of Architecture and Planning; Professor and Head, International Development Group Department of Urban Studies and Planning, David Diamond – MD Chief of Medicine, Patricia Gercik – Assistant Director of MISTI, Daniel Jackson – Prof. Computer Science., Lionel C. Kimerling – Prof. DMSE, Monty Krieger –Prof. Biology, Alan Oppenheim –Prof. EECS, Christine Ortiz – Prof. DMSE, Miriam Rosenbaum – Hillel, Josh Sklarsky – MIT undergraduate, Hibur, and Edwin Thomas – DMSE, Prof. Dept. Head.

October, 2007 : Informational / Student Recruitment Session with Hibur : The Technion-MIT Link (~ 40 student participants)

November, 2007 : MIT Press Release on MIT-Israel (<http://web.mit.edu/newsoffice/2007/misti-israel-t1128.html>)

November, 2007 : MIT-Israel Fund raising events held in Silicon Valley with Jake Seid (Lightspeed Venture Partners, co-founder MIT-CETI, EECS- BS '98 and M.Eng '98), Attendees from MIT included Prof. Christine Ortiz (DMSE), Prof. Suzanne Berger (Raphael Dorman and Helen Starbuck Professor of Political Science, Director of MISTI), and Anne Marie Michel (Assistant Dean for Development, School of Arts, Humanities, and Social Sciences).

November - December 2007 - Applications (CV, GPA, letter of recommendation, and statement of research interests) collected and evaluated, interviews conducted, acceptance decisions made.

January, 2008 : David Dolev, new MIT-Israel coordinator starts full time position in MISTI, Professor Christine Ortiz departs for sabbatical at Hebrew University in Jerusalem

January, 2008 : A new six-credit MIT course entitled "Israel: History, Culture and Identity" consisting of 8 lectures taught twice (during IAP and during the Spring term) by Prof. Nahum Karlinsky (Ben Gurion University) as preparation for MIT-Israel students.



March, 2008 David Dolev travels to Israel, he and Prof. Christine Ortiz meet with university leadership at the Technion - Israel Institute of Technology (Prof. Yigal Komem, Deputy Senior Vice President for International Academic Relations), Ben Gurion University of the Negev, Beer Sheva (Stanley Rotman, Prof. Dept. Electrical and Computer Engineering, Vice Dean), Tel Aviv University, Stanley Fischer (MIT EC 1978, Governor of the Bank of Israel), Boaz Tamir (PhD, '87, Political Science Department, Montefiore Partners Venture Capital fund), Haim Alcalay (President, MIT-Club of Israel, EECS '61, President, APA Advanced Technologies). The majority of the host organizations agreed to make significant financial contributions to the cost of hosting MIT students on their campuses. David Dolev also met with Arad Dalia, Google, Fischer Institute, Intel, Microsoft, Netafim, Neurim, Solel, Shatil-Haifa, Tel Aviv Municipality - Conservation Department, Teva, and Zoran. All were very excited about the possibilities and Google, Microsoft, Checkpoint, Shatil-Haifa, and Tel Aviv Municipality agreed to join the program.

MIT-Israel Summary of Activities / Timeline

FY 2007 - 2008

May, 2008 David Dolev and Christine Ortiz begin MIT-Israel collaboration with Robin Blatt, Director, Boston Haifa Life Sciences Initiative (BHLSI), <http://www.bhlsi.com/>



May, 2008 MIT-Israel students undergo additional preparatory training, meet with Israeli students on campus (Itai Turbahn-EECS, Economics, 2011 and Sharon Rapoport-Physics, Minor in Astronomy, 2010, Co-Presidents of the MIT Israeli Association : http://web.mit.edu/israelim/about_us.html), and take part in a seminar led by Rony Yedidia, Consul of Israel at the Consulate General of Israel to New England, entitled, "Israel at 60: Technology, Politics, and the Israeli Psyche"



May-June 2008 15 MIT-Israel Students depart for Israel.

JUNE 3rd, 2008 "Traditional" MIT CLUB of ISRAEL - HIBUR DINNER with MIT-Israel Students in Tel Aviv (Haim Alcalay, President, MIT-Club of Israel, EECS '61, President, APA Advanced Technologies), 7 MISTI Students, 3 Technion Hibur students and 2 MIT Hibur -students attended along with various MIT Alumni residing in Israel



July 10-13, 2008 "Israel and Technology" 4-Day Excursion and Seminar Series with David Dolev, MIT-Israel Coordinator and MIT-Israel Students. MIT-Israel Students will be visiting various technology companies and cultural sites around Israel.

MIT-Israel Class of 2008



In the summer of 2008, 15 MIT Students From Eleven Different Academic Departments (i.e. Civil and Environmental Engineering, Mechanical Engineering, Brain and Cognitive Science, Physics, Electrical Engineering and Computer Science, Architecture, Political Science, Chemistry, Biology, Mathematics, Management) departed for three month long summer internships in Israel. The 2008 class of students was exceedingly diverse from different academic levels (1 B.S. alumni, 3 recent B.S. graduates, 4 juniors, 2 sophomores, and 4 freshman) and ethnic backgrounds. Students from this years class have been placed in a variety of locations studying the following fields ; Ben Gurion University (2 students): solar energy, multispectral target detection, Technion - Israel Institute of Technology (4 students): structural and civil engineering, autism/behavioral science, hyperspectral imaging, The Weizmann Institute of Science (2 students): ribosome structure and function, functional organic systems, Tel Aviv University (1 student): nanoseismic monitoring, Tel Aviv Municipality (1 student): conservation - building restoration, Shatil-Haifa (1 student): planning multicultural cities, Checkpoint (2 students): enhancing software capabilities, Hebrew University of Jerusalem (1 student): genetically engineered tissues, Google Tel Aviv (1 Student). BGU, Weizmann, Technion, TAU, and Checkpoint have made significant financial and administrative contributions to the cost of hosting MIT students on their campuses.



Technion
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Israel Courses and Seminars Organized on the MIT Campus : Student Preparation, Spring 2008

A New six credit MIT course entitled "Israel: History, Culture and Identity"



As with all MISTI programs, students need to acquire country-based knowledge in order to prepare themselves for their internship abroad. Over the course of 8 weeks, MIT-Israel students took a new six credit MIT course entitled "Israel: History, Culture and Identity" taught by Professor Nahum Karlinsky. Professor Nahum Karlinsky received his Ph.D. (summa cum laude) from the Hebrew University of Jerusalem in 1996. He then began his affiliation with the Ben-Gurion Research Institute in Sede Boker. Nahum Karlinsky teaches Modern Jewish History and Israel Studies at Ben-Gurion University of the Negev, Israel. Among his books are *Counter History: The Hasidic Epistles from Eretz-Israel – Text and Context* (1998) and *California Dreaming: Ideology, Society and Technology in the Citrus Industry of Palestine 1890-1939* (2005). His current research focus on Jewish Philanthropy and the Jewish Credit Cooperatives in Eastern Europe between the Two World Wars; and on

The Palestinian-Arab Citrus Industry - Economic, Social and Cultural Considerations, a research project conducted jointly with Dr. Mustafa Kabha from the Open University of Israel.

The purpose of this course is to give a basic understanding of modern Israel to MIT-Israel students and the general MIT student body through lectures, discussions and projects. The course provides insight into modern Israeli politics, culture and identity. Among the topics explored are: the geography of Israel; Israeli political regime, society and economy; the Arab-Israeli conflict; the Holocaust and its impact on Israel, its history and identity; Jewish ethnic relations in Israel; the Palestinian-Arab minority in Israel; is there a unique Israeli culture?; Israel's settlement projects; the struggle for Israel's identity.



In order to achieve these goals various educational tools were used: in addition to assigned standard scholarly readings and power-point presentations other media was utilized: excerpts from movies about Israel, documentaries, online newspapers (e.g Haaretz), listening to online Israeli radio stations, online clips (YouTube) Israeli music, etc. For each session the students had to submit a summary of the readings. An important aspect of the students' involvement in the topic was their presentations (mostly in a power-point presentation form) of various topics about Israel. The student's commitment to learning about Israel strengthened with each session of the course and with their emotional and scholarly involvement with the topic. The unique format of the course was geared to the diverse levels of the students' previous knowledge about Israel. There were three main groups: (1) those who were very much familiar with Israel/Palestine, were born there (a Palestinian student from the West Bank), visited the country for a long period of time, or were children of Israeli immigrant families; (2) those who took part in the birthright Israel program and had some knowledge about Israel, its history and culture; (3) those who had no knowledge at all. Based on post-course evaluation all of the students, including those from the first category, gained a new depth in their understanding from the course. An additional three meetings were given to the students in the last category.

Israel Courses and Seminars Organized on the MIT Campus : Student Preparation, Spring 2008

Public Seminar at MIT: "Israel at 60: Technology, Politics, and the Israeli Psyche,"

MIT-Israel students also took part in preparatory training sessions during May, 2008, met with Israeli students on campus, and took part in a seminar led by Rony Yedidia, Consul of Israel at the Consulate General of Israel to New England. This seminar was entitled "Israel at 60: Technology, Politics, and the Israeli Psyche," From Oranges to Hi-tech in 60 Years. The abstract of her presentation is provided following.



ABSTRACT

Israel, a country comparable in size to New Jersey, in a very challenging political atmosphere, has emerged as a leader in technology worldwide. From 1950-1980 Israel focused on agricultural produce, irrigation and water management, and basic industries (textile, metal and machinery and chemicals). In 2008 it has the highest concentration of high-tech startups, after Silicon Valley (~1,200) in the world and is ranked 2nd for the most companies on NASDAQ, after U.S. (~80). It is a world-wide R&D center with Intel's and Microsoft's first center outside the U.S, Cisco systems only R&D center outside the U.S, and Motorola's largest R&D center outside the U.S. Israelis have invented much of the technology used today such as instant messaging (ICQ), firewall security software, Intel wireless computer chips, numerous medicines, and miniature video camera capsules to examine internal organs, the cell phone (invented by Motorola, with it's largest R&D center being in Israel), most of the Windows NT operating system, voice mail technology, and VOIP technology. Israel's achievements are rooted several unique factors:

- Geography- there is a limited local market as such there is an export oriented industry.
- Necessity of a strong defense industry has led to high intensity local research and development.
- Military training of almost all of it's citizens trains them in innovation and project management at a very young age.
- Lack of natural resources has brought about an emphasis on technology
- New immigrants has infused the economy with educated manpower
- Strong government support of R&D activities + International cooperation.

All of these have contributed to the highest number of engineers and scientists (per 10,000 workers) in the world, high quality of university education and basic research, strong university-industry cooperation, many free trade agreements, mergers and acquisitions, strong foreign investment in Israel and most importantly the "Israeli spirit" = Innovation, Flexibility, Persistence.

Safety / Security Sessions

Student safety is of the utmost priority. All MIT-Israel students take part in extensive pre-departure training sessions at MIT where the U.S. State Department security guidelines are clarified. MIT-Israel students are required to sign two U.S. State Department directed MIT documents, fill in an emergency form, and are given a general guideline safety sheet and personal important information sheet. All MIT Israel students are covered by IGM Patriot International Medical Insurance and SOS Emergency Services. Within the first week of their arrival to Israel all students are required to check in with their local contact. These local contacts are individuals at the University nearest to the student's location. The students receive a local safety and security orientation from these individuals. In case of a time of need, the students will be contacted both the MIT Israel Coordinator and their local contact. The majority of MIT Israel students receive on-campus lodging in University Dormitories which has extensive safety precautions. Off-campus lodging is approved prior by the MIT-Israel Coordinator. Students receive stipends that will enable them to travel safely in the country by taxis or car only (no public transportation). Students are registered with the local U. S. Embassy and International SOS.

"Israel and Technology" Four-Day Excursion and Seminar FOR MIT-Israel Students, July 10-13, 2008

As part of the internship experience MIT-Israel Program Coordinator David Dolev will be taking the students on a four day Israel and Technology excursion. They will be visiting technology companies and cultural sites. During the seminar time will be taken to connect the students pre-internship training and on-site work experiences in order to enable the students a comprehensive overview of Israel.

Day	Program	Notes
Thursday, July 10	<p><i>"TECHNOLOGY & NATURE : Exploring the Balance"</i></p> <ul style="list-style-type: none"> 9:00 Cross Israel Highway (Road 6)- Nachshonim- meeting with representative of "Derech eretz" 11:30 Visit the Technion University: visit labs working on different projects 1:00 Lunch on your own at the Technion 2:30 Visit the Oil Refineries in Haifa Bay 4:30 Mifgash (session) with Israelis Jewish and Muslim Students from Green Course at Oranim College – a Green Campus. 7:00 Druze hospitality + Dinner Presentation "High Tech military Technology" Elbit's visitors Center * 	<p>Transfer: 6:00 Beer-Sheva (Ben Gurion)</p> <p>7:30 Gedera (off Road 6)</p> <p>8:30 Nachshonim</p> <p>Overnight: Nof Hotel Haifa</p>
Friday, July 11	<p><i>"Exploring Technology in Israel"</i></p> <ul style="list-style-type: none"> 9:00 Panoramic view from Mt. Carmel (biosphere reserve): Haifa Bay & the Industrial Area- understanding the fragile balance between nature and technology. 11:00 Session in Neve Shalom & Lunch Ascending to Jerusalem (1:00) Jerusalem Railway Bridge –Environmental overview - Naomi Tsur, the Society for the Protection of Nature in Israel's national campaign manager for municipalities Panoramic view from Haas promenade Film Festival / Time to prepare for Shabbat Kabbalat Shabbat at a local synagogue Shabbat dinner at the hotel 	<p>Overnight in Jerusalem (Jerusalem Tower Hotel)</p>
Shabbat, July 12	<p><i>"Turning Off Technology"</i></p> <ul style="list-style-type: none"> Tour in the Old City by foot Lunch at the Hotel Session with David Dolev Free time Dinner at the hotel Session with the "Parents Circle": Forum of Bereaved Parents 	<p>Overnight in Jerusalem (Jerusalem Tower Hotel)</p>
Sunday July 13	<p><i>"Going Down in Order to Start- Up"</i></p> <ul style="list-style-type: none"> 7:30 Descending to the Dead Sea 9:00 Hike in Ein Gedi (Nachal David Reserve) 12:00 Lunch in Ein Gedi 1:30 Visit Dead Sea Works 2:30 Floating in the Dead Sea 4:00 Ascending towards Beer Sheva Good Bye! 	<p>Good Bye! Transfer to Be'er Sheva- Tel Aviv</p>

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MISTI MIT-Israel Collaboration with Hibur : The Technion-MIT Link



The MIT-Israel program has continued its collaboration with Hibur (organized through Hillel at MIT and through the office of Prof. Yigal Komem, Vice President of International Academic Relations at the Technion), a voluntary student-led initiative that aims to create a lasting partnership between the two premier technological institutions in the US and Israel: MIT and the Technion - Israel Institute of Technology. The support of **Miriam Rosenblum**, Hillel Director and **Hibur students** has been critical in the recruitment and advisement of the 2008 MIT-Israel summer interns, as well as the placement of MIT students in laboratories at the Technion. In particular, **Prof. Komem** and **Merav Guttman**, Hibur students **Omer Barzilai** and **Eliran Mesika**. MIT Hibur students participated in the Fall, 2007 informational providing extensive information on their experiences during trips to Israel. Technion Hibur students have been an extremely important factor in connecting all of the 2008 MIT Israel students to their Israeli peers by inviting them to the Technion to meet Technion Hibur students.

Hibur has also had a very successful videoconference-lecture program. These academic lectures are simulcast at both MIT and the Technion. Participants at both schools can ask questions of the lecturer, view the visual presentations, and see the students at the other university. These lectures are an integral part of the MIT Israel student reentry program and enable the returning interns to continue to build on their social and scientific connection with Israel. Professor Christine Ortiz, MIT-Israel Faculty Director, gave a joint videoconferenced research seminar between MIT and the Technion that was sponsored by and organized by Hibur in the Fall semester of 2007.

Prof. Ortiz also met with two Hibur delegations from the Technion visiting MIT in the Fall of 2007 (photo below).



Hibur Students from the Technion meet with Professor Christine Ortiz, MIT-Israel Faculty Director, Oct 12, 2007 at the MIT Institute for Soldier Nanotechnologies.

MISTI MIT-Israel 2008 Student Profiles (1)

Name : Batya Fellman

Profile : B.S. Mechanical Engineering 2008, Will attend Graduate student next year in Mechanical Engineering at MIT

Location : Hebrew University in Jerusalem

Project : Structure and mechanics of genetically engineered stem-cell based tissues; intervertebral disc repair

Batya's Comments : Why MISTI-Israel? When else do you have the opportunity to live in another country and experience a new culture for 3 months?



Name : Jesse Dunietz

Profile : Completed freshman year, Computer Science major

Location : Checkpoint - Tel Aviv

Project : Connectra is Check Point's SSL VPN, providing enterprise users with a simple and easy to use remote access capability. The project's goal is to extend Connectra's capabilities from "clientless" operation (where only a Web browser is assumed on the client machine) into a more powerful architecture, where the browser is enhanced with a Connectra-specific "plug in".

Jesse's Comments : Why MISTI-Israel? Lots of cutting-edge tech companies in Israel Spent the last year in Israel and couldn't wait to go back. Wanted to work on my fluency in Hebrew.



Name : Jennifer Chen

Profile : MIT alum (noneengineering major) enjoying her gap year, Law school prospective

Location : Shatil Haifa

Project : SHATIL has launched a visionary and innovative program to transform the city of Haifa into a model of joint Jewish-Arab living in Israel. Jennifer will help find materials about models for integrated, joint or multicultural cities in other places in the world and explore their applicability to Haifa.

Jennifer's Comments : Why MISTI-Israel? Field experience in the Middle East, Language Acquisition.

MISTI MIT-Israel 2008 Student Profiles (2)

Name : Dina Poteau

Profile : Completed Sophomore year, Course 1E – Environmental Engineering

Location : Technion

Project : Hyperspectral imaging and laser-induced fluorescence hyperspectral imaging for monitoring agricultural and environmental systems

Dina's Comments : Why MISTI-Israel? Live and work in a land that has been so influential in culture and religion. Studying agricultural engineering a nation that has been innovative with its limited resources and created revolutionary technology. Maybe learn some Hebrew, See Jerusalem!



Name : Lori Ferriss

Profile : Junior, Architecture student in Building Technologies program, Has lived in 4 different states, but never abroad

Location : Tel Aviv Municipality- Conservation Dept.

Project The conservation project contains 1800 buildings in the Tel-Aviv –Jaffa city including different periods and styling starting from the arab style, eclectic and mainly modern movement from the 1930s-1940s. The framework starts from early design stages and historic documentation to the physical process of construction changes in the facades and interiors, all due to restricted conservation requirements and adaptations for contemporary needs. Lori will follow the different stages of work in the conservation process of a building with few case-studies that will be chosen at the time of beginning of the intern.

Lori's Comments : Why MISTI-Israel? Spend the summer in Israel! Get field work experience in architectural preservation, Immerse myself in a new culture and language for 3 months



MISTI MIT-Israel 2008 Student Profiles (3)

Name : Elijah Jordan Turner

Profile : Freshman majoring in Course I, Civil and Environmental Engineering, minoring in Applied International Studies

Location : Technion

Project : Pedestrian accident mapping using multivariate analysis techniques, field observations, development of intervention program

Elijah's Comments : Why MISTI-Israel? To travel to my favorite region of the world – the Middle East. To combine the fields of my major – civil engineering – and minor – international studies. To apply and build upon my knowledge of Arabic and Hebrew thus far.



Name : Michal Wexler

Profile : Graduated with B.S. in Applied Mathematics and Management, 2008

Location : Checkpoint

Project : Analyzing and summarizing metrics describing the network security environment, integrating mechanisms and algorithms that identify anomalies and interesting patterns in these metrics, tuning and adapting the algorithms according to real-life measurements, Identifying gaps and failures in the algorithms and propose extensions and alternatives, implement improvements up to a prototype level and integrate them into an existing Proof of Concept environment



Name : Miriam (Mish) Madson

Profile : Junior in Computer Science/premed courses, Media Lab UROP with Affective Computing, Weekly CS teacher at local middle school

Location : Technion

Project : Decision-Making Assistance and Facial Affect Recognition for People with Autism

Mish's Comments : Why MISTI-Israel? I'll be practicing my Hebrew! I'm excited to work in a high-quality research setting: I'll be developing computer programs for adolescents with autism at the Technion ("Israel's MIT"). I'm enjoying expanding my cultural perspective through the MISTI seminar.



MISTI MIT-Israel 2008 Student Profiles (4)

Name : Tamara Litwin

Profile : Junior, Chemistry and Biology

Location : Weizmann Institute of Science

Project : Structural basis for resistance to ribosomal antibiotics

Tamara's Comments : Why MISTI-Israel? To do research in the prestigious lab of Professor Ada Yonath at the Weizmann Institute of Science, using the techniques of protein crystallography to learn about the structure and function of enzymes, To get to know Israel better and hopefully learn some Hebrew



Name : Risha Mars

Profile : Freshman

Location : Ben Gurion University

Project : Signal processing for hyperspectral image exploitation

Risha's Comments : Why MISTI-Israel? To gain valuable work experience in a new and exciting place, To experience a different culture and travel to an unfamiliar region, To work in the largest hi-tech sector outside of the US



Name : Stephen Fried

Profile : Chemistry / Physics Junior

Location : Weizmann Institute of Science

Project : Self-assembly processes and photo-physical properties of perylene diimides in water. We are interested in these nanoscopic structures because of possible applications in solar energy conversion.

Stephen's Comments : Why MISTI-Israel? I am thrilled to have the opportunity to work on a chemistry research project in Israel with MISTI. I have been a UROP student in the Nocera group at MIT; through MISTI, I will get to work with a colleague of my group, on a different but related project. As a Jewish American, I am excited to work on a scientific problem that bridges two countries, each important to me, and central to my identity.



MISTI MIT-Israel 2008 Student Profiles (5)

Name : Ellann Cohen

Profile : B.S. 2008 Course 2 – Mechanical Engineering

Location : Ben Gurion University

Project : Solar concentrator systems requires a knowledge, with high statistical accuracy, of the direct beam component of the solar irradiance. This component is normally monitored using a sun-tracking normal-incidence pyrheliometer (NIP)

Ellann's Comments : Why MISTI-Israel? Excited about experiencing new culture, love renewable energy and will get to do research in the area.



Name : Meena Viswanath

Profile : Freshman at MIT, Course 1C - Civil engineering

Location : Tel Aviv University - Minerva

Project : Nanoseismic monitoring (NM) is a brand new field in seismology that focuses on the analysis of extremely weak sources which could not be detected until now (the standard detection threshold has been lowered by 1 to 4 orders of magnitudes). The goal of the project is to develop and calibrate new NM applications within the Dead Sea region.

Meena's Comments : Why MISTI-Israel? I would love to gain experience working in my field internationally, especially since I've just started civil engineering. Israel is the most amazing country in the world and I'm very excited to spend time there with all my fellow MISTI-Israelis!



Name : Naomi Stein

Profile : Sophomore in Civil Engineering, a believer in creativity in engineering

Location : Technion

Project : The project aims at the conceptual design and realization of a new laboratory for research on intelligent structures in civil engineering and will range from drawing the conceptual research directions and up to the specification and realization of the experimental capabilities and needs.

Naomi's Comments : Why MISTI-Israel? I've always wanted to study or research at the Technion. To go back to Israel! (I recently spent ten days there over winter break) ...and work on my Hebrew.



MISTI MIT-Israel 2008 Student Profiles (6)

Name : Ammar T. Ammar

Profile : Rising senior, Electrical Engineering and Computer Science, Minor in Linguistics

Location : Google Tel Aviv

Project : Software Engineering, Natural Language Processing, Digital Design.



MISTI MIT-Israel FY 2008-2009

Strategic Plan and Tentative Schedule of Events

Throughout the upcoming 2008-2009 year, the focus will be on fund-raising in collaboration with the MIT Office of Leadership and Giving, student recruitment, the formation of new relationships and the strengthening of existing collaborative ties with host universities and companies, the development of new sub-programmatic activities and, pending the availability of additional funding, the creation of **MIT-Israel Collaborative Research Seed Fund** to initiate and support scientific collaborations between MIT and Israeli scientists/faculty in critical areas (e.g. defense, stem cell research and tissue engineering, high resolution microscopy, nanotechnology, energy, etc.). – all with the ultimate goal of increasing the visibility and expanding the broader impact of the program. MIT-Israel will continue to work with **Hibur** on many of these new initiatives. A new program **advisory board** will be formed who will meet once an academic semester to get feedback and advice on these areas.

In terms of **recruitment**, to raise the number of applicants from the MIT student body, in particular at the graduate and post-doctoral level, MIT-Israel is putting forth an aggressive outreach campaign to students and faculty from all schools. This includes preparing a DVD of the 2008 internship experiences, press releases and a fall programming schedule. During September and October of 2008, MIT-Israel will take part or organize the following events.

Tentative Fall Schedule of Events :

MISTI Open House - for all MIT Students interested in overseas internships	Sept. 17th 12 noon - 4pm
Internship Reflections Session - for returning MISTI interns	Sept. 18th 5-7pm
MIT-Israel CSAIL Informational (Host : Prof. Daniel Jackson)	Sept. 24th, 5-7pm
MIT-Israel Faculty Affiliates Dinner	Sept. 22, 6pm, MIT Faculty Club
Adir- Interfaith Event -geared to students taking part in MIT interfaith activities	TBA
MISTI Gala 25 Years	Oct. 2nd, Evening
EECS Open House	Oct. 7th, 4pm-6pm
Architecture and Urban Planning (Host : Prof. Eran Ben Joseph)	Oct. 7th 6-8pm
MIT-Israel General Informational Session- for all MIT students	Oct. 16th, 5pm-7pm

Additional sub-programmatic activities being planned include a **podcast** and **seminar series** on Israel Culture, Science and Technology.

Specific **entry-level internships tailored to freshmen** will be explored based on the longstanding CETI China initiative, for example this could involve having MIT students teach MIT OpenCourseWare courses to high school students in Israel, be counselors at science and technology summer camps, and investigate opportunities for MIT students to bring their expertise to work on social justice issues.

In coordination with MIT's **Study Abroad** office, MIT-Israel wants to facilitate enrollment for a semester or year's study at the Technion and other Israeli institutions.

Lastly, we aim to organize a **Hebrew Language-Ulpan**: In order to enhance the student's cultural experience and support the capacity of students to be a bridge between the U.S. and Israel, we would like to set up an opportunity to study Hebrew language. This may take place at MIT or during IAP in Israel at the Technion

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Arie and Ida Crown Memorial Foundation (Charles Goodman)



The Kogan Family

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Lionel C. Kimerling, Thomas Lord Professor, Department of Materials Science and Engineering

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Anne Marie Michel, School of Humanities, Arts, and Social Sciences, Assistant Dean for Development

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Daniel Jackson, Professor of Computer Science, MIT

Diane E. Davis: Associate Dean MIT School of Architecture and Planning; Professor and Head, International Development Group Department of Urban Studies and Planning

Markus Zahn: Thomas and Gerd Perkins Professor of Electrical Engineering, Director, VI-A Internship Program Massachusetts

MISTI MIT-Israel Personnel Biographies

CHRISTINE ORTIZ, Ph.D. Associate Professor of Materials Science and Engineering,
MISTI MIT-Israel Faculty Director



Professor Christine Ortiz is currently Associate Professor of Materials Science and Engineering at the Massachusetts Institute of Technology and Faculty Director of the [MIT International Science and Technology Initiatives \(MISTI\)](#) MIT-Israel Program. Professor Ortiz obtained her B.S. from [Rensselaer Polytechnic Institute](#) in Troy, NY and her M.S. and Ph.D. from [Cornell University](#) in Ithaca, NY, all in the field of materials science and engineering. After graduation, she was granted a NSF-NATO post-doctoral fellowship which she used to carry out research in the Department of Polymer Chemistry, [University of Groningen](#), in the Netherlands. Professor Ortiz joined the faculty in the [Department of Materials Science and Engineering at MIT](#) as an Assistant Professor in 1999 and was tenured in 2006. Her [research group](#) focuses on the high resolution imaging and nanomechanics of structural biological materials such as cartilage, bone, seashells, and armored fish. In 2002, Dr. Ortiz was awarded a National Science Foundation Presidential Early Career Award for Scientists and Engineers (NSF-PECASE) which was presented to her by President George W. Bush at the White House in Washington DC. Her research has been published in most recently in the; *Biophysical Journal*, *Physical Review Letters*, *Nano Letters*, and *Nature Materials* and also has been featured in *Physics Today*, *Science News*, *USA Today*, the *Discovery Channel* and on the covers of the *Journal of Structural Biology* and the *Journal of Materials Science*. She has given 90+ invited lectures including 20+ international in 12 countries and 8 different Gordon Research Conferences. Professor Ortiz was recently nominated and selected to participate in the 2008-2009 [Defense Science Study Group](#). Professor Ortiz has scientific interactions throughout Israel and is committed to fostering and developing collaborative research and educational relationships with Israeli companies and universities. Professor Ortiz has a strong commitment to teaching, mentoring, and increasing diversity at all educational levels. She has developed and taught a popular new undergraduate course annually each spring semester "Nanomechanics of Materials and Biomaterials" and is a frequent participant in [MITES \(MIT Minority Introduction to Engineering and Science\)](#), [MSRP \(MIT Minority Summer Research Program\)](#), [SACNAS \(Society for Advancement of Chicanos and Native Americans in Science\)](#), [Institute Diversity Committees](#), and [SHPE \(Society of Hispanic Professional Engineers\)](#). Professor Ortiz' full curriculum vitae is located [here](#).

MISTI MIT-Israel Personnel Biographies

David Dolev, Center for International Studies, MISTI MIT-Israel Coordinator



David Dolev is currently the founding Coordinator of the MIT International Science and Technology Initiatives (MISTI) MIT-Israel Program. He was a paratrooper/infantry commander in the Israeli military, youth movement leader, and founding member of Kibbutz Lotan, where he lived and worked for almost twenty years. As General Manager of the Kibbutz and Director of the Lotan Seminar Center he was at the forefront of developing new business initiatives built on the ideological commitment of the community and its unique environmental surroundings. Among those initiatives are The Kibbutz Lotan Birdwatching Center and The Center for Creative Ecology. David has a B.A in Economics and Management from the Ben Gurion University/Open University and an M.A in Jewish Education from Hebrew College. David has published articles and received awards for his work on intercultural relations and is deeply committed to developing personal and communal relationships and understanding between individuals and groups from diverse backgrounds.

MISTI MIT-Israel Personnel Biographies

Suzanne Berger, Raphael Dorman and Helen Starbuck Professor of Political Science,
Director, MISTI



Raphael Dorman and Helen Starbuck Professor of Political Science and Class of 1960 Fellow. Professor Berger works in comparative politics and in political economy. Her books include *Peasants Against Politics*; *The French Political System: Dualism and Discontinuity in Industrial Societies* (with Michael Piore); *Organizing Interests in Western Europe* (editor); *National Diversity and Global Capitalism* (with Ronald Dore); *Made by Hong Kong* (with Richard Lester) and *Global Taiwan* (with Richard Lester). A 2003 book *Notre Première Mondialisation* [Our First Globalization] analyzes political responses to capital mobility and trade in France, 1870-1914. Her most recent work, *How We Compete*, presents the findings of a five-year-long study by MIT social scientists and engineers on the impact of globalization. She is Director of the MIT International Science and Technology Initiative Program. Professor Berger is a Research Associate and member of the Committee of the Center for European Studies at Harvard University. She served as Vice President of the American Political Science Association and as founding Chair of the Social Science Research Council Joint Committee on Western Europe. She has been elected to the American Academy of Arts and Sciences. Her current research concerns the impact of globalization on domestic institutions.