



In This Issue

MIT Mentshn of Mention  
 Director's Update  
 Torah from Tech  
 2016 Annual Fund  
 Planned Giving  
 On the Calendar

**Greetings and early happy Purim from MIT to our Alumni, Faculty, Staff, Parents and Friends!**

1. The 14th Annual Latke-Hamentaschen Debate Teams
2. President Rafael Reif is a great sport in celebrating the month of Adar with Rabbi Fisher (see Director's column below)
3. Dalia Leibowitz '16 and Jesse Michel '19 represent the latke and hamentaschen at the annual Latke-Hamentaschen Debate, and playfully vie for best food.

**Mentshn of Mention**



Leah Slaten '18  
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Hi, I'm Leah. I'm a sophomore at MIT studying computer science, and have recently become the President of MIT Hillel. MIT pulled me in from the very first day I visited as a junior in high school. There is an energy that lights up MIT and its students that I have seen in very few other places in the world. I can feel my brain expanding every day with new ways to observe and interpret the world. Sometimes, this comes in the form of the academic torture I endured in my freshman year 8.022 physics class, but at the same time, there is nothing more satisfying than figuring out the solution to a really challenging problem and recognizing how much I learned.

Perhaps most importantly, MIT has given me the time to meet amazing and talented people, discover new hobbies, and learn more about my own priorities in life. I love experimenting in the kitchen, running on the Charles, practicing yoga, and just spending time relaxing with friends. Sometimes my friends joke that I'm terribly optimistic, but I really just love the life I've forged for myself here.

Participation in the Hillel community was never a question for me. I grew up in the modern orthodox community, first in Milwaukee, and then in Teaneck, NJ, attending SAR High School (the most amazing school in the world, after MIT).

**Executive Director's Update**



"When the month of Adar enters, we should increase happiness" (Talmud Taanit 29a). I have a personal custom leading up to Purim (the holiday that brings us the month of Adar's joy) to wear a different funny hat each day. Walking down the Infinite Corridor or around campus wearing a cheesehead, or monkey hat, or cheeseburger beret, or spiked-tie-dyed wig, or any of the other 30+ hats I own, definitely brings smiles and laughter to others. Each time I get to explain why I am wearing a Pharaoh headdress or rabbit ears, it makes everyone on campus a little more knowledgeable of Jewish practice, and spreads a little more Jewish pride. And, it's fun not to take ourselves too seriously all the time.

Having fun seems to be the past month's theme. Our fourteenth annual Latke-Hamentaschen Debate continued to bring humor – creative scientific, political, and engineering jokes about our holiday delicacies – to campus. Many thanks to our line up of professors. Team Hamentaschen: Ina Lipkowitz (21L), David Vogan (18), Lionel Kimerling (3). Team Latke: Aram Harrow (8), Chris Capozzola (21H), Stephen Van Evera (17). And our moderator, Bob Ferrara '67 of the Department of Student Life. Even President Reif gave his seal of approval, in a letter of support dotted with Yiddish phrases. If you missed this year's fun, the vote was a tie, so you have another chance to participate next year!



Another large annual social event was JSkate – getting out on the Johnson Ice Rink with Jewish students from MIT and other Boston campuses. And, this year, for the first time, another inter-collegiate Jewish event was created. A number of MIT teams traveled to UMaryland for a [Shabbat-friendly hackathon](#). Kudos to Suri Bandler '17 who was on the second-place team for the app they created in just hours. Other MIT teams and individuals (eight attendees from MIT -- no surprise we had the largest delegation!) also coded hard over the weekend.



Looking ahead, I have been alternating years attending AIPAC and JStreet conferences. If you will be in DC for AIPAC's Policy Conference the week of March 20 (right before Purim, but I will probably be leaving silly hats in Cambridge), let me know, and we'll try to meet at the AIPAC Village for some coffee between sessions. Six students will be representing MIT: Evan Crane '17, Rogers Epstein '19, Josh Fishman '19, Jonathan Hurowitz '18, Isaac Silberberg '16, and (non-Jewish Undergraduate Association president) Matt Davis '16. Given the election year, I expect a lot of excitement and discussion.

Happy Adar/Happy Purim,

## Torah from Tech



*Our Torah this month is taught by Howard Katz '78, who received degrees in Chemistry and in Humanities and Science with a concentration in Music. He then went on to obtain a Ph.D. in Organic Chemistry under Nobel Laureate Donald Cram at UCLA in 1982, where he also met and married his wife Marion. He spent 22 years at Bell Labs, gaining the title of Distinguished Member of Technical staff and also being elected President of the Materials Research Society for 2004, before moving to his present position as Professor of Materials Science and Engineering at Johns Hopkins University, where he served as Chair from 2008-2014.*

*His research interests are in organic, polymeric, and hybrid materials for alternative electronics, sensing, and energy conversion. Howard and Marion have two sons, Joshua (V, '06) and Jeremy (XVI, '09), and three*

*adorable grandchildren thanks to Josh and his wife Tamar: Sima, Uri, and Gabby. He can be reached at [hekatz@jhu.edu](mailto:hekatz@jhu.edu)*

Science is present from the very beginning of the Torah, in Bereishit, or Genesis. Not only is Genesis scientific through and through, it touches on most of the modern branches of science. On the First Day, there are light and darkness, introducing physics. On the second and third day, the different phases of matter in our world; the atmosphere, the oceans, and the solid land are formed, bringing in geology. In the ensuing days, we are introduced to botany, astronomy, zoology, and a hint of physiology. The Garden of Eden story (and of course, Noah) features meteorology. However, when I read Genesis, I personally feel a little left out, because the fields that I have personally studied the most, chemistry and materials science, are not mentioned nearly as explicitly through dramatic events in Genesis. There is no creation of a molecule, nor any exact chemical reaction, mentioned in Genesis. Chemistry may be "behind" a lot of what happens in Genesis, like growing crops or the shining sun, but it does not merit its own "day" of creation.

Furthermore, where do we find materials science in the Torah? One answer is in the five-parashah cycle of readings in the book of Exodus that begins with the portion Terumah. These chapters are focused on the building of the Mishkan, a portable shrine, or "tabernacle", which held the tablets of the covenant that Moses had carried from Mount Sinai and otherwise served as the focal point for the priestly service and for the communal religious assemblies. The description of the building, the decorations, the clothes worn by the participants, and the order of the ceremonies are all discussed in great detail.

We are told how much of each of the metals *Zahav*, *Kessef*, and *Nechoshet* were used in the building of the mishkan, and what the latter two were used for. *Zahav* means gold, and then, as now, it was among the most precious of metals. According to this passage, it was distributed throughout the sanctuary, and was used extensively for sculptures, the ark, the table, and lamps. Gold is very stable, flexible, and occurs naturally as the metal itself. It can be rolled out into extremely thin foils, called gold leaf, as had been done in ancient Egypt, and by manuscript decorators throughout history.

*Kessef* means silver, and in modern Hebrew, *Kessef* is also the word used to mean "money". Silver is not as colored, or as stable as gold. It is found in ores that have to be smelted, so telling the ores apart and developing processes to get the silver out was a higher level of technology than simply sifting gold out of a riverbed. Silver ore is usually a mixture with copper, zinc, and lead compounds. When the ore is put in a ceramic container and blasted with fire, the less valuable metals oxidize first, leaving silver as the last metal standing.

That brings us to *Nechoshet*. The *Hertz Chumash* defines it as "brass", an alloy of copper and zinc. The text of the *Eitz Chaim Chumash* defines it as copper itself, but the commentary and many other sources say a better definition is "bronze", an alloy of copper and tin. The root of the word, *nachash*, is related, at least by sound, to the word "snake", a sculpture of which was fashioned by Moses later on out of "*nechoshet*". In this section of the Torah, *nechoshet* is associated with the covering of the altar in the courtyard just outside the mishkan "building". The hottest temperature I ever personally experienced, 120 degrees Fahrenheit, was at an ancient copper mine, Timna, in the Negev Desert. The Timna mine was once a complete one-stop shop for copper technology, run first by the Egyptians and later by the Israelites, especially under King Solomon, after settling the land of Canaan, including refineries and workshops.

But materials science is not only about metals! In Exodus chapter 39, verses 6-13, we are treated to a jewelry store's worth of crystals: carnelian (**ruby**), topaz, smaragd (**beryl**), carbuncle (**turquoise**), **sapphire** (lapis lazuli), **emerald (or diamond?)**, jacinth, agate, **amethyst**, beryl (chrysolite), **onyx**, **jasper**. Twelve precious stones for the twelve tribes of Israel. Some of them have obscure translations (see [http://www.about-birthstones.com/breastplate\\_of\\_aaron.html](http://www.about-birthstones.com/breastplate_of_aaron.html)). Whatever any individual term means, it is clear that this list spans a wide range of materials. Some of them are silicon oxides, like amethyst, related to quartz. Others are aluminum oxides, like sapphire, ruby, and emerald. Diamond is a form of carbon. The rest are zirconium oxides.

When I was looking at colleges, some people were skeptical about the size of the MIT Jewish community, which many perceive to be less vibrant than larger communities such as those at Columbia or Penn. However, I knew that a smaller community would allow me to attain an important leadership role and to branch out of my "Yeshiva league" bubble. From the day I stepped on campus for Campus Preview Weekend, I felt comfortable with and welcomed into the community. By now, the Hillel leadership really has afforded me the leadership opportunities I desired.

I am excited and honored to have the chance to give back to the community that has meant so much to me. I hope that as President, I can unify the student board and Hillel community through great events and a strong sense of community. Already, we are attracting unprecedented numbers of students to Shabbat dinners, and we have had some very popular events, including a communal ice skating event to kick off the semester and the annual Latke-Hamentaschen Debate. I hope that we can maintain the excitement throughout the semester and provide as many students as possible with a diverse and tight community at the Hillel.

**Thank you for  
supporting  
MIT Hillel!**

Your generous support allows us to help keep Jewish life vibrant on the MIT campus!



How did the builders of the mishkan and the priests of Aaron tell all these apart? Today, we analyze for elements and take x-rays to find out where the atoms are in the gemstones. In museums and gift shops, we can see the six-sided crystals of quartz, or the four-sided prisms of topaz. In ancient days, one could have also examined the angles that the different facets of the crystals made with each other, because different minerals have different crystal arrangements. Otherwise, they could have measured densities—the practitioners of the Jewish laws of business transactions were experts in measuring density in order to be able to discern a fair deal from a scam.

It is clear that scientific insight, including materials science, is thoroughly infused into all parts of the Torah along with the philosophical, ethical, and historical wisdom. This is a tradition that started with the earliest of our sacred writings, and continues in modern Israel today where experts at a half dozen major universities are running world leading efforts to cure disease and harvest energy from the sun. Just as the ceremonies and teachings at the mishkan ultimately led to great advances in civilization by those who brought their knowledge to the Land of Israel, so may the scientists of modern Israel collaborate with scientists the world over in solving the most pressing problems of humanity today.

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### **MIT Hillel's 2016 Annual Fund Add to Jewish life @ MIT!**



I started to think about this column on Super Tuesday, during the communication overload and excitement of primary season. In our house, we are glued to the election coverage – my husband is generally a news junkie, our one child still at home is a politics and history buff, and I'm in a state of disbelief about how divisive some of the messaging is.

Regardless of the political rhetoric, at the heart of all of the candidates' speeches is the underlying goal to build stronger communities and country by collecting and allocating resources. Sounds a lot like what I and my campus colleagues do, with the critical difference being that any one person's tax bill is not tied so directly to his or her one vote, thereby diluting the element of personal commitment. Who among us thinks how lucky we are when we write our check to the IRS in April? It is a very different feeling than when we support our shuls, schools, Hillels, food banks, hospitals, and more. In my role, I never lose sight that each donation is a choice, whether a new one or a renewed one, and that each contribution makes an impact on our corner of student life.

This is the time of the year when I get nervous – the December end-of-year donations are in, and it's months before the reunion / commencement / MIT fiscal year season brings us to our needed goal. On a weekly basis I assure myself of the gifts I can "count on", and I'm amazed at what an incredibly steadfast community the MIT Hillel supporters are. Those of you who've been with us for one, two, three, or more decades have inspired me to expand my work today with our younger alumni to ensure the same for the future of MIT Hillel.

As always, it is an honor to join with you in maintaining and building a strong Jewish presence at MIT. I thank you for your support of MIT Hillel's mission and Rabbi Fisher's leadership.

Thank you,  
Marla Choslovsky SM'88,  
MIT Hillel Director of Development  
[marla360@mit.edu](mailto:marla360@mit.edu)

**Add your name to MIT Hillel's 2016 Donor Roll!**

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### **Tamid Initiative - Planned Giving @ MIT Hillel**

We invite alumni and friends who care deeply about Jewish life at MIT to consider joining the Institute's **Katharine Dexter McCormick (1904) Society (KDMS)** and be part of the **Tamid Initiative** by making a bequest to MIT, for the benefit of MIT Hillel. Your generosity will help MIT Hillel engage today's students, securing our Jewish future with confidence.

MIT and MIT Hillel are eager to help you meet your objectives. For more information, please contact MIT Hillel Director of Development, Marla Choslovsky, [marla360@mit.edu](mailto:marla360@mit.edu). To inform us that you have already planned such a gift, please contact us directly or [let us know in writing](#).

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### **On the Calendar**

#### **Leading Jewish Minds @ MIT: Spring Line-up**

- **March 11**, Ed Roberts '57, SM '58, SM '60, PhD '62, David Sarnoff Professor of Management of Technology, Founder and Chair of Martin Trust Center for MIT Entrepreneurship, Co-Founder and Chair of MIT Sloan Entrepreneurship & Innovation MBA Track
- **May 13**, Eran Ben-Joseph, Head, Department of Urban Studies and Planning

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