Hack the Libraries
Bringing MIT’s ingenuity to our essential work
page 6
From the Director

“Here we shall offer shelter for the search for knowledge to all those who come, at any age, to join in that search. And the only loyalty test we shall impose is that of loyalty to learning.”

—MIT PRESIDENT JEROME WIESNER’S INAUGURAL ADDRESS, OCTOBER 7, 1971

I was struck recently as I read in the Institute Archives Jerome Wiesner’s words from 45 years ago; they couldn’t be more resonant today. They speak to the unique culture of MIT and what President L. Rafael Reif calls “a meritocratic openness to talent, culture, and ideas from anywhere.” They also capture the essence of libraries and our values. In our ambitious plans for the future and in the work we do every single day, we strive to be inclusive and welcoming, to fuel discovery and learning, and to push toward more equitable access to information.

The Future of Libraries Task Force’s vision for the library as an open global platform is a call for people everywhere to join in the search for—and creation of—knowledge. In our preliminary report, we wrote that we hoped to inspire hacks in the great MIT tradition of using ingenuity and teamwork to create something remarkable. In this issue of Bibliotech, we’re highlighting some of our technology experiments, collections, and initiatives that exemplify this spirit—from capturing geospatial data with drones to an artist’s reimagining of Moby Dick. I hope you’ll find them as inspiring as I do.

Last year at commencement, President Reif encouraged MIT’s graduates to “hack the world,” urging them to make it more like MIT: open, inventive, bold, generous, and kind. I think the library we envision is critical to that kind of world. So, let’s hack the library. Will you join us?

All the best,

Chris Bourg, PhD
DIRECTOR OF LIBRARIES
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Visit the Maihaugen Gallery
Monday—Friday, 10 a.m.–4 p.m.
Learn more about the exhibit at chinacomestomit.org

China Comes to ‘Tech’: 1877–1931

Maihaugen Gallery exhibit tells the story of pioneering international students at MIT

MIT News’ Peter Dizikes spoke with Emma Teng, T.T. and Wei Fong Chao Professor of Asian Civilizations, curator of the exhibit.

“IT’s exciting to see these [students] as a bridge that brought ‘Tech’ back to China, but also promoted knowledge of China here at MIT.”

—EMMA TENG

Q: When did Chinese students start coming to MIT, and why?
A: A lot of people don’t know that Chinese students were here early, but in 1877 one student [Mon Cham Cheong] from Guangdong, China, matriculated at MIT’s School of Mechanic Arts. Then, beginning in 1879, a batch of eight students on the Chinese Educational Mission came here under the sponsorship of the Chinese government. The students at that time were mainly focused on learning railroad engineering, mining engineering, mechanical engineering, and naval architecture. Soon, MIT became one of the favorite destinations for Chinese science and engineering students.

Q: What was the overall experience like for these students?
A: The early students faced a number of challenges. Not only were they learning a rigorous science and engineering curriculum, but they also had to master English and adjust to a new culture. One of the things I learned was how immersed the early students were, especially those who came in the 1910s and 1920s, in all aspects of MIT student life. They participated in athletics, debate, theater, the professional societies, the Institute Committee; they were really involved in virtually every aspect of student life.

Q: What kinds of things would you like people to consider when they view the exhibit?
A: I’m hoping the exhibit will really inspire people to reflect on what international students contribute to MIT and to America at large. I think one of the most powerful lessons that I learned myself is that not only did many Chinese leaders in science and technology in China get their educations here at MIT, but they also contributed a lot to the MIT community during their years here.

They really worked as cultural ambassadors to let the MIT and greater Boston communities learn more about Chinese culture and history and current events. And they inspired some of our professors to learn more about the history of science in China. They were also an important bridge in bringing MIT alumni and faculty to China in the 1890s and 1920s to lecture, teach, or practice engineering. It’s this two-way exchange that international students bring to our communities.

* This is an excerpted version of an article that originally appeared on news.mit.edu

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China Comes to ‘Tech’

Bibliotech

News from the MIT Libraries
Building Toward the Future of Libraries

MIT community and libraries globally weigh in on task force vision

A Resonant Vision

Following its release, the task force invited comments on its bold ambitions, which Director Chris Bourg characterized as a “moon shot for libraries.” MIT students, faculty, and staff responded through an open forum, emailed to the task force, conversations on the open publishing platform PubPub, and social media. “Frankly, some of our academic library colleagues have been envious at the level of engagement we’ve experienced,” says Bourg.

The broader library and education communities have indeed taken notice. Media outlets including WGBH Boston Public Radio, Inside Higher Ed, and Swedish library publication Biblioteksbladet have featured the report, and Bourg and other Libraries staff have presented at conferences around the country. Many across the field are finding the report inspiring.

“MIT’s Task Force on the Future of Libraries has developed one of the most forward-looking, innovative visions I have seen from a research library in 30 years,” says Charles Henry, president of the Council on Library and Information Resources. “This report is a clear call for collective action on the challenges facing scholarly information and the organization of knowledge.”

What’s Next

The task force is using community input in finalizing the report, which will be done late this spring. Meanwhile, the Libraries staff is already forming teams to strategize about how to implement each of the 10 recommendations. An internal organizational engagement team has held multiple forums to discuss the roadmap ahead. “A lot of the conversation has been around the question of how we become the kind of organization we need to be in order to realize the vision of the report,” says team member Stephanie Hartman.

Bourg is confident the Libraries are well on their way: “Whether it’s reconfiguring spaces in Hayden Library, the strides we’ve made in open access, or the research we’ve done with our users around their needs for text mining or data visualization, we’re always experimenting. That’s just part of being MIT.”

“She has a global vision.”
—READS THE COVER OF SWEDISH LIBRARY PUBLICATION

Libraries Convene Space Planning Group

Chaired by Chris Bourg and J. Meejin Yoon, professor and head of the Department of Architecture, the group was charged with making recommendations for the renovations of the Libraries’ physical spaces across the Institute.

This spring, the group worked to identify needs for four core uses of library space:

- CONTENT/HOLDINGS: collections encompassing both physical and digital, general and archival
- LEARNING: from individual study to group work
- MEETING/EVENTS: whether conversations with friends, meetings between researchers, or film screenings, lectures, and other special events
- MAKING/CREATING: the many ways students and scholars are engaged in the writing, making, and publishing of knowledge

The group includes School of Humanities, Arts, and Social Sciences faculty members Stephanie Frampton and Jeff Ravel and Dean Melissa Nobles (ex-officio); Robert Jaffe, Jane and Otto Morningstar Professor of Physics at the School of Science; Rafi Segal, associate professor of architecture and urbanism, School of Architecture and Planning; Greg Raposa, space administrator, Office of the Provost; and Tracy Gabridge, associate director for academic and community engagement at the Libraries.

“The task force conceived of libraries as not just containers for books, but as platforms for the innovative use, exchange, and creation of knowledge.”
—J. MEEJIN YOON

"The preliminary findings blow the doors off traditional concepts of libraries as enclosed spaces with physical objects under tight control."
—MIT ALUMNI ASSOCIATION’S SLICE OF MIT BLOG

To read the full report visit: future-of-libraries.mit.edu

Last fall, the Institute-wide Task Force on the Future of Libraries released its preliminary report, with 10 recommendations to reenvision the academic library as an open global platform serving the needs of our communities. At a global institution like MIT, those communities are more far-reaching than ever, and in today’s world, equitable access to trusted information has never been more important.

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In its preliminary report, the Future of Libraries Task Force envisioned an open library platform, one that it hopes will inspire “clever, creative, and productive ‘hacks,’ in the form of innovative uses, tools, and programs that extend and amplify our work.” Here’s a look at some of the Libraries’ recent projects and experiments that reflect this ethos—creative and collaborative solutions that reflect MIT’s pioneering spirit:

The Future of Producing/Sharing/Consuming Content

The CODEX Hackathon, co-sponsored by the Libraries, gathered programmers, designers, writers, librarians, publishers, readers, and others to imagine the future of books and reading. Groups developed such innovations as LitBit, an app designed to track and encourage long-form reading like a fitness tracker; and a data reporting dashboard for public libraries. Libraries Web Developer Matt Bernhardt said of working on the latter: “It gave me an opportunity to work with technologies I don’t usually use—especially that sort of broadening horizons is energizing and can be helpful down the road when taking on new projects.”

The Aga Khan Documentation Center released a prototype of Layer Cake, a 3-axes mapping tool that enables users to build maps layering narrative, time, and space. AKDC Program Head Sharon C. Smith, Ph.D., collaborated with Harvard Ph.D. candidate Ali Aqar Alibah and GSD graduate James Yamada on the pilot project documenting author Ibn Jubayr’s 12th-century pilgrimage from Spain to Mecca. The resulting map shows his travels temporally, geographically, and with descriptions of the sites he visited.

The Lewis Music Library hosted the Karajan/MIT Classical Music Hackathon, inviting participants to build tools that allow innovative, digital experiences of classical repertoire. One was an app for playing music on a smartphone that matches the music to the user’s pace of walking, running, or even dancing. Another team built a virtual reality experience around the music of a classically trained viola player.

The Libraries partnered with MakerWorkshop, an MIT student-run makerspace, to make a number of equipment kits available to check out from Rotch Library. With resources like hand tools, cameras, electronics, and sensors, the kits enable students to bring the tools to the project rather than bringing their project to the tools.

Developing New Tools for Discovery

The Libraries ran a beta trial for Yewno, a search tool designed to foster serendipitous discovery; it uses full text analysis and machine learning to create a visual, interactive map of connected concepts. Users are testing a “bento box” search interface on the Libraries website. Based on the concept of a Japanese lunch box with different compartments, it serves up brief search results from a variety of sources, organized by format/type, to help users make better choices.

Libraries staff are currently developing a prototype for a text-mining service for the MIT thesis collection. Using a simple interface or building their own tool using an API, researchers would be able to search across the set of theses and dissertations digitized by the Libraries, querying the full text for further research and analysis.

Transforming Teaching and Learning

Staff from across the Libraries came together to help Professor Michael Cuthbert use the Class of 1982 Sequentiary, a rare and delicate 15th- or early 16th-century manuscript, in his spring 2017 Medieval and Renaissance Music class. The team collaborated to bring this rare archival object into the digital realm, using the International Image Interoperability Framework (IIIF), a standardized method of delivering images online, and a viewer which allows users to zoom, pan, and study 304 pages of music in extraordinary detail.

With support from the Experimental Collections Fund, Libraries Senior GIS Specialist Daniel Sheehan was trained and certified to safely fly small unmanned aerial vehicles, often called drones, to collect data and create detailed models and maps. Sheehan is now bringing these skills to IAP sessions, working with classes such as Professor Kristin Bergmann’s Sedimentary Environments, and training others to fly safely and legally.

Over the 2017 IAP, collections in Hayden Library were reorganized, freeing up areas the Libraries will use for study space experiments. Over the spring term and into the summer, the community will be invited to try different space and furniture configurations.
Staff News

Libraries welcome new colleagues and salute decades of service

New Appointments

HABIBI ARTIMIER // Project Manager and Business Analyst
ELISABETH BALDWIN // Collections Archivist, Aga Khan Documentation Center
ANNA BOUTIN // Librarian, School of Architecture and Planning
ALEXANDRA CHASSANOFF // Software Curation Postdoctoral Fellow
LARA DAY // Access Services Assistant
OSMAN DIN // Senior Software Engineer
ALANNA GODDARD // Access Services Assistant
LAURA HANSCOM // Scholarly Communications and Licensing Librarian
CHERRY IRRABH // Human Resources Assistant
SOFIA LEUNG // Teaching and Learning Program Manager and Liaison Librarian
HATTIE LLAVINA // Web Developer
DONALD LONG // Access Services Associate
ALENA MCNAMARA // Librarian, School of Architecture and Planning

GRACE MILKEY // Facilities Administrator
RAHUL NAIR // Access Services Assistant
DIANNE RHEE // Resource Sharing Assistant
MATTHEW SABA // Visual Resources Librarian, Aga Khan Documentation Center
DANCY THOMPSON // Access Services Assistant
ECI TURNOR // Humanities and Digital Scholarship Librarian
SUZANNE WALLER // Grants Development Officer
JACLYN WILSON // Access Services Associate
MadelINe WraBle // GIS Specialist
Heather yager // Associate Director, Digital Projects
ANDROMEDA YELTON // Scholarly Communications and Licensing Librarian

Retirements

MARILYN MCsWEENEY // Head, Acquisitions and Discovery Enhancement
STEPHEn sKuCE // Program Manager for Rare Books
CAROL FREDERICK // Access Services Assistant

Q&A with Heather Yager

Meet the Associate Director, Digital Projects

Q: One of your responsibilities in this role is “to expand the library platform.” What does that mean to you?

A: To me, expanding the library platform means strengthening the connections between our collections—viewing a key technical report in the context of primary archival sources that document its creation, for example, or linking across domains to retrieve all works associated with a single researcher, regardless of origin. So, in this sense, it means extending our collections toward one another to discover the threads that connect ideas and people across the breadth of the material held in the Libraries.

Q: How else would you like to see the Libraries build connections?

A: I envision us expanding the outward reach of our collections, contextualizing objects not only within our own collections, but across global repositories of information in order to surface thematic connections that are independent of domain or publishing status.

Most important, though, will be expanding the scope of possibility for our user communities. I envision us exploring the social function of the library in the context of our digital collections. Our library platform should inspire innovation, invite exploration, and instill excitement in our global community—connect library users not only with the information they are seeking, but with each other.

Q: In your spare time, you like to play the piano and the accordion. Will we see you showing off your skills at the Lewis Music Library sometime soon?

A: Only if you enjoy polka music!

New from MIT Press

MIT Press Bookstore Launches New Author Series

Authors@MIT features authors and experts on the cutting edge of topics that we all need to know more about: young people and new media, business innovation, life in a digitally defined world, the intersection of science and art, and more. Events take place at the Press Bookstore and other area venues, in collaboration with the Boston Book Festival, the Cambridge Public Library, Le Laboratoire, local restaurants, and other partners.

“We’re really thrilled to have the opportunity to offer the community a completely new kind of author series, explicitly designed to promote public engagement with science, technology, and design broadly defined,” said Amy Brand, director of the MIT Press.

The series kicked off in February with a talk by Meryl Alper, author of Giving Voice: Mobile Communication, Disability, and Inequality, in conversation with MIT Professor Jennifer Light, and in April featured MIT Media Lab Director Joi Ito discussing his book, Whiplash: How to Survive our Faster Future, with Robert Langer. Upcoming talks include Steven Strogatz, author of The Knowledge Illusion: Why We Never Think Alone, in conversation with Drazen Prelec, professor of management science and economics at MIT Sloan, on May 9.

To learn more visit mitpressbookstore.mit.edu/events
Libraries receive fine press editions of **Moby Dick**

*Gift from alumnus affirms enduring value of print—By Hannah Piecuch*

“If you hack the library without including print, you’re doing it wrong,” says Greg Eow, associate director for Archives and Special Collections. “If you don’t have a physical book, it’s like the act of reading is missing.” Eow says, “People really want to reengage with the book beyond just an information delivery system.”

Eow says that the gift fits within the Libraries’ collections, says Eow, not only because of MIT’s rich tradition in naval engineering and maritime history, but because the physical books themselves represent print as an unsurpassed technology for communication.

“The Arion Press book brings together engineering, art, and design with the written word, and allows us to think about the book beyond just an information delivery system,” he says. Encountering a book put together as thoughtfully as these two editions are is increasingly rare at a time when modes of communication are in flux. “It really allows us to see the power of materiality to command a reader’s attention.”

**From the Archives**

**Libraries Launch Women in Science and Engineering@MIT Archival Initiative**

The Institute Archives and Special Collections (IASC) has been focusing increasingly on documenting aspects of MIT history that have been underrepresented, and women faculty in science and engineering has been one such area. Now, with the generous support of Barbara Ostroff ’81, the Libraries are launching a new initiative to acquire, preserve, and make accessible the archives of MIT’s notable female science and engineering faculty.

**MIT Reads Engages the Institute Community**

The Libraries’ Institute-wide reading program got off to a strong start this fall, drawing hundreds of community members for group discussions of *Redefining Realness*, and a conversation with its author, Janet Mock. The writer, media professional, and transgender rights activist spoke to a capacity crowd in Kirsch Auditorium in November.

“The thing that really made my heart sing was the idea of the MIT community getting excited about a book and coming together around the act of reading,” says Nina Davis-Milis, director of community support and staff development.

Excitement continued for the winter selection, *Hidden Figures* by Margot Lee Shetterly, chosen in partnership with MIT’s Black Women’s Alliance. The largely unknown story of African American women scientists at NASA drew more than 50 members of the community for discussion events. This spring, MIT Reads partners with the MIT Literary Society to read and discuss *The Paper Menagerie* by Ken Liu.

**Open Access Policy Expanded**

The 2009 MIT Faculty Open Access Policy, one of the country’s first, allows MIT authors to legally hold onto rights in their scholarly articles, including the right to share them widely. The policy, which until now applied only to faculty, has been very successful: 44 percent of faculty articles published since the policy passed are now shared in DSpace@MIT. The Libraries worked with graduate students, faculty, and the administration to create an opt-in version of the policy that is available to all MIT authors, including students, postdocs, and staff. “It’s a strong step towards the openness called for in the Future of Libraries report,” says Ellen Finnie, head, Scholarly Communications and Collections Strategy.

**What’s New?**
Spring Events 2017

APRIL EVENTS

MIT Reads Book Discussions
The Paper Menagerie

April 25
7 PM
April 26
12 PM
Stratton Student Center (W20)

Composer Forum
Guillermo Klein
April 26
5 PM
Lewis Music Library (14E-109)

Author Talk
Susan Maycock and Charles Sullivan
April 27
6:30 PM
Cambridge Public Library

MAY EVENTS

Author Talk
Steven Sloman with Drazen Prelec
May 9
6 PM
MIT Press Bookstore, 300 Massachusetts Ave.

Finals Week
Study Breaks
May 18–23

Study Break
Cookies with Canines
May 18
2–3:30 PM
Hayden Library (14S-100)

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