

# Bib·li·o·Tēch

NEWS FROM THE MIT LIBRARIES

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MITLibraries

## FROM THE DIRECTOR

Richard Howard



In the early decades of MIT's existence, the Institute was firmly focused on inventing a new form of technically-oriented higher education. As one of the first American undergraduate engineering schools, MIT saw its mission as one of training future working engineers and managers to advance the nation's emerging industrial ambitions. The curriculum had a strong practical bent, in keeping with its primary goal of training engineers for the workforce by teaching best practices.

From the earliest days, science and mathematics were included in the curriculum. However, courses that emphasized engineering practice and technical operations, in such fields as metallurgy, mining, mechanical engineering, industrial chemistry, and electrical engineering, formed the heart of instructional design and delivery. In time, science and research would join best practice to enable strong relationships with industry and government, but in the beginning hands-on learning was seen as the best way to train engineers for practical vocations and industrial management.

By 1910, the Institute's faculty and administrative leadership saw the need to move beyond the purely practical in the curriculum. Faculty who came to MIT following experiences in German universities brought an appreciation of participation in active research programs, and had come to see the value of close collaboration between academic research and industrial firms. Over time MIT would create science-based research programs that would change the value for such an approach in both industry and government.

Like engineering fields, the professional practice of research libraries is based on academic disciplines. Information science, behavioral science, and computer science are among the fields that inform the work of 21st century research libraries. In today's rapidly changing information environment, every aspect of library practice is benefiting from robust research programs. Volatility in the production, discovery, distribution, and persistence of information of value to research universities requires concerted research activity on the part of research libraries.

For many years the MIT Libraries have focused their research efforts on "born-digital" information, and other digital information of particular interest to the MIT community. Recent funding agency mandates regarding data management plans have highlighted the emerging needs of researchers. For example, while the MIT Libraries are able to support knowledge production in traditional image, text and tangible formats, managing research data in large quantities has required a fresh look at capabilities and capacity. Similarly, changes in the ways faculty and students conduct research and pursue scholarship pose new challenges to capturing and organizing advances for the future. High-performance collaboration, new forms of evidence, new approaches to sharing advances in knowledge within disciplines, and open access to research and

**Information science, behavioral science, and computer science are among the fields that inform the work of 21st century research libraries. In today's rapidly changing information environment, every aspect of library practice is benefiting from robust research programs.**

scholarship are but a few trends to be monitored and accommodated. Information policy likewise has a profound impact on the ability of the MIT Libraries to support MIT's mission and future goals.

Understanding and managing the new information lifecycle has emerged as an important research priority for the MIT Libraries. An information lifecycle framework has enabled the Libraries to parse the components of the new information management environment and to tackle portions of the research challenges in manageable pieces. New leadership in key roles is enabling us to generalize local innovations, collaborate with researchers within and outside MIT, bring data to bear on information policies, practices, and standards, and solve emerging problems in order to support new services.

Just as MIT learned to rely on research programs for its future, so too has the MIT Libraries learned that the conduct of research is critical to the future of research libraries. Our research will help shape the future. And future-aware planning will enable the MIT Libraries to incorporate best-of-class research findings in information science into our practices to continue to support MIT research and learning into the future.

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## BARKER LIBRARY READING ROOM REOPENS



Barker Library reading room with newly-restored oculus, now a 24-hour study space.

After an extensive restoration project, the Barker Library reading room has reopened to reveal the grandeur of the restored oculus atop the Great Dome, and the beauty of the rotunda's original architecture hidden for many years in darkness.

First opened in 1916 as the Institute's original library reading room, the space has always served as a reading room but has undergone many transformations over the years. In 1942 the 27-foot skylight, or oculus, was covered to protect against wartime bombing raids. In the 1950s an illuminated "drop ceiling" was installed 20 feet above the library floor obscuring the top of the Dome. From the 1970s until recently, "street lights" on posts provided dim lighting. Now after months of meticulous restoration, the oculus has been reopened to allow natural light to once again fill the reading room. Additional LED lighting around the perimeter of the rotunda highlights decorative acanthus leaves and other details once unnoticed.

During the project, further steps were taken to outfit the reading room as a secure 24-hour study space. This March, for the first time in its 97-year history, the reading room became accessible to the MIT community 24 hours a day, seven days a week. Students can now enjoy the beauty of the restored room as well as other comforts—the installation of acoustic panels and a new sound-mitigation system help soften echoes and ambient noise, and comfortable chairs, large tables, and individual study carrels have also returned to the reading room, making it a perfect space for quiet study.

## RESEARCH PROGRAM FOR INFORMATION SCIENCE

MIT Libraries has a history of innovative research spanning more than fifty years. In the last decade, this research has moved toward the leading edge of the digital revolution, and how it affects the conduct of research and scholarly communications. DSpace, the open-source institutional repository system designed to support preservation and access; SIMILE, which uses semantic technologies to enhance interoperability among digital assets; and Exhibit, which enables innovative interactive data visualizations, have been used by thousands of institutions. These projects reflect the Libraries' broad understanding of its mission to preserve, disseminate and advance knowledge.

The Libraries' Research Program for Information Science, led by Director of Research, Dr. Micah Altman, seeks both to solve emerging problems in information management that are essential to support new and innovative services, and to amplify the impact that MIT can have on the development of information science, information policy, and scholarly

communication through participation in the development of standards, policy, and methods related to information science and information management.

The research program is focusing on important issues for libraries including: digital preservation and long-term access at scale; developing methods and tools for managing confidential information in research; managing and disseminating "big" data; tackling information management and access for massively open online courses (MOOCs); and collecting and managing crowd-sourced information. Altman is collaborating with library staff, faculty, partner institutions, and funders, to expand the Libraries' research portfolio in these areas, and several efforts are already underway. Over the last year, ongoing research yielded a variety of publications and awards.



Dr. Micah Altman,  
Director of Research

To learn more see: [informatics.mit.edu](http://informatics.mit.edu)

# FROM THE ARCHIVES

## INSTITUTE ARCHIVES AND SPECIAL COLLECTIONS AS CLASSROOM

The use of MIT Libraries' special collection materials in the classroom continues to grow each year, as more and more faculty incorporate rare and unique materials into their classes and choose to bring their students to the Institute Archives and Special Collections reading room (14N-118) to work with original materials. Imagine the delight of a student handling a rare text from the 16th century, or the excitement of finding clues deep in archival materials to support a theory.

Professor Jeff Ravel's history and comparative media studies classes regularly come to the Archives to learn about the collection and dissemination of knowledge, and its importance in the development of society. Studying important historical volumes, students begin to realize how knowledge develops and builds upon itself. Similarly, students in Professor Ben Weiss's geophysics class are shown rare texts from the 16th and 17th centuries which document early science hypotheses, showing how many of today's scientific theories materialized alongside farfetched ideas. And this semester Professor Gretchen Henderson's *(un)Writing the Book* class will spend all its sessions in the reading room and the Wunsch Conservation Lab examining a large variety of texts, in their quest to better understand the book.

While learning from history, students also learn in-depth research skills essential to their fields of study. For example, students in Professor Marcia Bartusiak's *Advanced Science Writing Seminar* spend the semester using archival collections to research final papers on a particular historical topic. Recent topics included medical and health issues, travel journals, the Charles River Dam development, and natural language processing. In Professor Elizabeth Wood's historical methods classes, students learn the practical and theoretical aspects of conducting historical research, using materials from both archival and rare book collections.

L. Barry Hetherington



Using special collections in the Archives' reading room

Instruction staff Michelle Baildon, Nora Murphy, and Stephen Skuce, work with faculty to tailor their classes to make the most beneficial use of resources. These experts impart knowledge and information about both the subject and materials. In a note of thanks, Professor Wood's students wrote, "Thank you so much for everything you have done for our class this semester! ... [it] has given each of us the chance to grow and learn as up-and-coming historians ... we are all grateful for your knowledge and passion!"

By conveying our knowledge and passion, the Institute Archives and Special Collections has become an integral part of the MIT educational experience. The deeply-held feelings connected to our tangible rare and unique collections continue to inspire new generations of scholars.

**Tom Rosko**  
 Institute Archivist and Head, Institute Archives & Special Collections  
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## CLASSES IN THE INSTITUTE ARCHIVES AND SPECIAL COLLECTIONS ACADEMIC YEAR 2012-13:

21W.760 *Writing in the Museum*, Gretchen Henderson  
 CMS.801 *Media in Transition*, Jeff Ravel  
 21M.013J *The Supernatural in Music, Literature and Culture*, Mary J. Fuller  
 21W.021 *Writing and Experience: MIT Inside, Live*, Lucy Marx  
 21W.825 *Advanced Science Writing Seminar I*, Marcia Bartusiak  
 12.201/501 *Essentials of Geophysics*, Ben Weiss  
 11.THT *Thesis Preparation*, Cherie Abbanatt  
 4.677 *Space, Place, Frames, Spheres: Shaping Identities in Enlightenment Contexts*, Drew Armstrong

21H.390 *Seminar in Historical Methods*, Elizabeth Wood  
 21W.761 *(un)Writing the Book*, Gretchen Henderson  
 21H.185 *Introduction to Environmental History*, Harriet Ritvo  
 21H.142 *Age of Reason*, Jeff Ravel  
 21L.470 *18th Century Literature, Science in the Age of Reason*, Noel Jackson  
 21M.235 *Monteverdi to Mozart: 1600-1800*, Teresa M. Neff

## NOTEWORTHY CONNECTIONS

### MUSIC IN THE MIT LIBRARIES

A new exhibition exploring the extraordinary connection between the MIT mind and music opened this February in the Maihaugen Gallery. The exhibit delves into the holdings of the Lewis Music Library and the Institute Archives and Special Collections, to reveal MIT's diverse musical interests, the accomplishments of its talented students and faculty, and the rich history the Institute's musical groups and clubs.

*Noteworthy Connections* was inspired by the connections between music, science, and engineering, evident from MIT's earliest years and very much alive today. As early as 1890, MIT extra-curricular activities included a Glee Club, Banjo and Guitar Club, orchestra, and Mandolin Club. Today, nearly half of current undergraduates will take music classes or participate in performing ensembles.

Library collections reflect the diverse musical interests of the MIT community. Holdings include musical treasures ranging from Gregorian chant to the music of Lady Gaga, a wide range of media formats from vinyl records to streaming audio/video, and original publications from the 16th into the 21st century, including MIT faculty compositions. An extensive collection of scores are studied and performed by MIT's talented students, faculty and staff. All of these resources support the ever-present connection between music and the MIT mind.

*Noteworthy Connections:*  
*Music in the MIT Libraries* is currently on view in the Maihaugen Gallery (14N-130). See [libraries.mit.edu/maihaugen](http://libraries.mit.edu/maihaugen) for hours and information.



MIT Museum

## DIGITAL PRESERVATION WORKSHOP AT MIT

The MIT Libraries will host its first Digital Preservation Management (DPM) workshop series June 9 to June 14, 2013. The successful series launched in 2003, hosted previously by Cornell University, and the Inter-university Consortium for Political and Social Research (ICPSR) at the University of Michigan, offers guidance on developing effective digital preservation programs to managers of digital content. Over the past decade it has attracted attendees from around the world—over 1,000 managers of digital content representing more than 350 organizations in more than 35 countries.

Nancy Y. McGovern, who leads the Curation and Preservation Services department of MIT Libraries, is the co-developer of the DPM series and serves as the primary curriculum developer and lead instructor. Kari R. Smith, the Libraries' Digital Archivist, has also been an instructor in the DPM workshop for several years and will continue in her role as a member of the workshop faculty.

As part of her involvement with the workshop, McGovern will serve as the Principal Investigator for a two-year grant from the National Endowment for the Humanities (NEH) beginning in March 2013. The \$86,000 grant will fund a series of assessment activities, including a two-day working meeting to be held at MIT, that will evaluate the outcomes of this and related curriculum development projects and make recommendations for the future of digital curation and preservation continuing education. The development of the curriculum and delivery model for the workshop series has benefited from three previous grant awards from NEH. The workshop organizers plan to offer several workshops each year supported by a cost-recovery tuition model.

To learn more see: [dpworkshop.org](http://dpworkshop.org)

L. Barry Hetherington



Nancy Y. McGovern,  
Head of Curation and  
Preservation Services

# SUPPORTING THE LIBRARIES

## MEET DIRECTOR OF DEVELOPMENT, KAIJA LANGLEY

In February 2013, Kaija Langley joined the MIT Libraries as Director of Development. She has had a successful career in resource development in Boston and the San Francisco Bay Area. Most recently, Langley served as Associate Director of Philanthropy at The Nature Conservancy (TNC) in Boston where she cultivated, engaged, solicited and stewarded major gift donors throughout Massachusetts, Connecticut, New York, New Jersey, Florida, California and London. During her tenure with TNC, she also volunteered for a temporary five-month assignment, post-oil spill, of managing staff and donors across the five Gulf States to raise money for the \$10 million Gulf Restoration Fund. Prior to working at TNC, she worked at the Museum of Science in Boston, where she developed a passion for Science, Technology, Engineering, and Mathematics (STEM) Education.

### What drew you to MIT?

Even before relocating to Boston from the San Francisco Bay Area, I was aware of the stellar reputation of MIT. I believe very strongly that science and technology have the power to solve some of the world's greatest challenges and will within my lifetime. Both the Museum and TNC were science-based organizations and MIT feels like a natural progression professionally. Not to mention MIT's balanced approach regarding academic rigor, collaboration, and creativity makes it a very unique place to study and work.

### Why the MIT Libraries?

From the time I was a young child, libraries have been an important part of my life, personally and academically. My mother was an elementary school teacher and my father a chemist. Access to knowledge—both inside and outside a classroom—was revered in my home. I am particularly impressed with the MIT Libraries' open access efforts, as well as its work preserving materials for future generations. I feel honored to have the opportunity to work on behalf of the MIT Libraries to increase their resources to meet the ever-changing needs of a world-class research library.

L. Barry Heitherington



Kaija Langley,  
Director of Development

### What have you learned at past organizations that will help the Libraries?

What I've learned at every organization thus far is that no single individual succeeds. Fundraising at its core is an educational endeavor and requires a very collaborative process to be successful. Developing positive, cooperative relationships with donors, staff, and students is a necessity and makes the process of raising resources much more rewarding for everyone involved.

## LEWIS MUSIC LIBRARY TO RECEIVE \$250,000 TO DIGITIZE HISTORIC RECORDINGS



Lionel and Vilma Kinney

MIT enjoys a rich history of music highlighted by memorable concerts performed on campus by faculty, students, and outside artists. From the 1950s and into the 1990s, the medium for recording concerts was often reel-to-reel tape. The MIT Libraries owns hundreds of these concert recordings, several of which are unique and irreplaceable, but unfortunately they are slowly deteriorating. If ignored, the sound on these tapes will eventually be lost.

Recently an MIT alumnus stepped in to save and preserve these important recordings. Lionel Kinney ('53), a former trumpet player and manager of MIT's music clubs, and sponsor of the Music at MIT

Oral History Project, has made a five-year pledge totaling \$250,000 to establish the Lewis Music Library Digital Initiatives Fund.

The immediate priority of the fund will be to digitize the library's historic MIT tape recordings. The process of identifying and evaluating recordings at greatest risk is the first step. Some of the recordings appear in easily identifiable collections, while others are hidden within faculty collections held by the Institute Archives and Special Collections. Once an inventory is taken, the library will prioritize the recordings according to rarity and condition. When digital copies are made, the Libraries plan to make this music available as widely as possible.

To learn more about the Lewis Music Library Digital Initiatives Fund and how to support this work and other digital projects, contact:

**Kaija Langley, Director of Development**  
617 452 2123  
klangley@mit.edu

# MOOCS AND LIBRARIES

## THE IMPACT OF MITX AND EDX

*The New York Times* coined 2012 the “Year of the MOOC,” or massive open online course, as more and more universities opened their virtual doors to a growing global community of online students. MIT itself was at the forefront of the trend, forming MITx, and then edX with Harvard in May 2012.

More than 150,000 students from over 160 countries registered for MITx’s first course, 6.002x: *Circuits and Electronics*. This past fall two additional courses were offered, 6.00x: *Introduction to Computer Science and Programming* and 3.091x: *Introduction to Solid State Chemistry*. This spring, MIT will expand course offerings to include 8.02x: *Electricity and Magnetism* taught by legendary professor Walter Lewin, and 14.73x: *The Challenges of Global Poverty*.

In the words of President Rafael Reif, “Online education holds the key to making residential education better and less expensive even as it promises to offer education to many millions more people.”

So what does this mean for academic research libraries and how they might support online courses and a massive number of global online learners? Steve Gass, MIT Libraries’ Associate Director for Research and Instructional Services, provides insight:

### Have the MIT Libraries been involved in any MITx courses to date, and if so how?

The MIT Libraries’ Video Production group has provided key video support and content for all of the courses mentioned above. Their work includes capturing new lectures, digitizing previously recorded content, editing and transcribing videos, enhancing audio, and creating promotional videos. This activity has happened at an intense pace during the startup phase.

### What kind of role do you envision academic libraries having in MOOCs/MITx?

I believe the MIT Libraries will play an important role in MITx, and indeed, things that libraries do well will need to be addressed if MOOCs are to be successful. What are these things? Two of the most important areas are ensuring appropriate access to the pedagogical content—textbooks, journal articles, images, videos,

and more; and working with faculty to help students learn the necessary skills to find, evaluate, and use appropriate information resources in support of the faculty member’s learning objectives.



edX video editor



### What actions have the MIT Libraries and other academic libraries taken to prepare for MOOCs?

When the Libraries realized that MITx/edX was an urgent priority for MIT, we began reaching out to key participants to identify the needs of MIT faculty and students for library and information services. What we’ve learned will allow us to begin scoping the changes and effort required by the Libraries to support MITx. A key step for MIT was the appointment of Prof. Sanjay Sarma as its new Director of Digital Learning last November. Since then we have begun working closely with Prof. Sarma and his new team to understand how the Libraries can contribute productively to what will be a growing and long term commitment by MIT.

One of the most exciting developments is the collaboration we’ve formed with other edX partner libraries—Harvard, Berkeley, Texas, Wellesley, and Georgetown. We’ve created two working groups. One focuses on the thorny challenges associated with access to content, which includes copyright and licensing, fair use concerns, and access for learners with disabilities. The other concentrates on the range of issues around working in an online, worldwide environment to help students attain the critical research skills needed to complete course work. These two groups will deliver their preliminary reports later this spring, and from this we hope to begin to create best practices in these areas that can be adopted and adapted by other institutions.

### What does the future look like?

That’s a great question, and one that many of us are trying to figure out. As President Reif suggests, the goal is to improve MIT’s residential education while making education more affordable to a larger audience. One can imagine a future where several hundred MIT courses are hosted every semester on the edX platform. While most MITx courses are taken for free and without credit, there is a vibrant MITx Certification Program available for a modest fee. And options exist for an MITx Mini-Degree Program where students complete a suite of courses in a variety of disciplines. I can also envision all math and science General Institute Requirements (GIRs) as edX courses, enabling prospective students to complete the first part of their MIT education prior to matriculation. This would allow residential education to become more flexible, with an increased emphasis on tailored experiences for students that include more research, hands-on experiences, and internships all over the world. Will all that come to pass? It will be exciting to see what happens.

**MIT PROFESSOR AND LIBRARIAN COLLABORATE ON 10 PRINT**

MIT Associate Professor of Digital Media Nick Montfort, and librarian Patsy Baudoin, have collaborated with eight other authors on a book that takes a single line of code—the extremely concise BASIC program for the Commodore 64—and uses it as a lens through which to consider the phenomenon of creative computing and the way computer programs exist in culture. The authors consider randomness and regularity in computing and art, the maze in culture, and the popular BASIC programming language. The book's title is the code. It was published in December by MIT Press, and is freely downloadable under a Creative Commons license at [10print.org](http://10print.org).

**ALTMAN WINS PIZZIGATI PRIZE**

Micah Altman, MIT Libraries' Director of Research, has been awarded the Antonio Pizzigati Prize for Software in the Public Interest for his work developing software that encourages transparency and public participation in the electoral redistricting process. Michael McDonald, Associate Professor of Government and Politics at George Mason University is also honored in the award.

The \$10,000 cash grant is awarded annually to those who have created or led an effort to create an open source software product of significant value to the nonprofit sector and movements for social change.

The prize is named after MIT computer science graduate, Tony Pizzigati '92, who worked at the MIT Media Lab and the MIT Laboratory for Computer Science.

**TIM T-SHIRTS INSPIRE SOCIAL SHARING**



Have you noticed these Tim the Beaver t-shirts around campus lately? MIT Libraries' lucky Twitter followers and Facebook fans have won these shirts in recent social media contests. It's easy to participate, just look for questions on Twitter or Facebook and chime in with your answers.

In February we asked followers to send us titles of books they love. Here are a few of the many great answers we received:  
*Averno* by Louise Gluck  
*Cronopios & Famas* by Julio Cortázar & Paul Blackburn  
*Guns, Germs, and Steel* by Jared Diamond  
*The Hitchhiker's Guide to the Galaxy* by Douglas Adams  
*Infinite Jest* by David Foster Wallace  
*Kite Runner* by Khaled Hosseini  
*Sisters Brothers* by Patrick deWitt  
*The Brief Wondrous Life of Oscar Wao* by Junot Diaz

**UPCOMING EVENTS**

**Wednesday, April 10, 2:00pm**  
*MIT Community Open House Under the Dome*  
 Barker Library (10-500)

**Thursday, April 25, 3:00pm**  
*Herb Pomeroy-MIT Jazz@50 Exhibit*  
 Lewis Music Library (14E-109)

**Tuesday, April 30, 12:00pm**  
*11th Annual Prokopoff Concert*  
 Lewis Music Library (14E-109)

**Throughout April**  
*Popular IAP workshops return*  
 See [libraries.mit.edu/classes](http://libraries.mit.edu/classes)

**Sunday, June 9–Friday, June 14**  
*Digital Preservation Management (DPM) Workshop*  
 hosted by MIT Libraries

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