# Report to the President year ended June 30, 2024, MIT Libraries

In academic year 2024, the MIT Libraries continued to use our <u>Enduring Vision</u> to shape our strategic and operational work. In addition, we have been guided by the emerging strategic priorities articulated by President Sally Kornbluth, in particular artificial intelligence (AI), climate change, and freedom of expression.

The Libraries are key collaborators with the MIT Office of Research Computing and Data, and we are directly engaged in shaping the Institute's various responses to the rapid advent of generative AI. Our persistent efforts to create a more open and equitable scholarly landscape aim to make world-changing research – on climate solutions and other critical challenges – available to the broadest possible audience, as guickly as possible.

In our unique role as an intellectual and campus crossroads, we are key players in MIT's efforts to foster a culture reflective of our shared values of excellence and curiosity, openness and respect, and belonging and community. In the 2023-24 academic year, our community was deeply impacted by the war in the Middle East; amid the tensions on campus, the Libraries were privileged to play a role in community efforts to foster understanding and compassion. Our collections, programs, and spaces invite everyone at the Institute to engage in constructive dialogue, learning, and reflection.

Highlights of the MIT Libraries' accomplishments over the past academic year are provided below, organized by the principles of our Enduring Vision.

## A Digital-First Library

Efforts to maximize digital access to content and services included the following:

- The MIT Libraries spent over \$13.3 million on digital content in FY24, representing 97% of our collections spend.
- Digitization efforts this year topped 114,000 pages, an increase of 8% over the previous year and a steady increase over pre-pandemic volume. On-demand scanning requests climbed to our highest level ever, representing a 21% increase over last year and a fivefold increase over pre-pandemic requests. Despite the increases, we have once again improved turnaround time for both thesis scanning (a two-day reduction over last year) and on-demand manuscript scanning (a seven-day reduction).

- As a follow-up to developing a strategic plan for improving the digital user experience, the Libraries launched the internal Discovery Governance Group to operationalize the plan. Fifteen specific areas of improvement to enhance the digital experience were identified, resourced, and set up for execution in the coming year.
- The Libraries, anticipating the transformative impacts of AI (and generative AI in particular) on our workforce and our work, established a new discussion group, AI4Lib, to examine AI opportunities, experiment with tools, and consider areas where staff would benefit from workforce development and skill building. Initial workforce development efforts are underway, focused on understanding the ways in which MIT researchers and students use AI in their work (or build AI as a part of their research), and Libraries' leadership teams have created initial sets of AI guidelines to address the most common use cases in the Libraries, including licensing of collections, selection of third-party tools, and citing the use of generative AI in scholarly works.

## Open and Equitable Scholarship

The MIT Libraries continued its relentless pursuit of a more open and equitable scholarly landscape:

- March 2024 marked 15 years of the MIT Faculty Open Access Policy. As of that month, there were 51,693 papers in the <u>open access collection</u> of DSpace@MIT, and there had been 25.8 million downloads of articles in the Open Access (OA) collection since the policy began. Fifty-two percent of MIT faculty research articles are made openly available in the OA Collection.
- Using the MIT Framework for Publisher Contracts, the Libraries' Negotiations Team completed agreements with IOP, Royal Society of Chemistry, IEEE, Public Library of Science (PLOS), and SAGE. The SAGE agreement included support for a Subscribe to Open (S2O) pilot title, *Dialogues in Climate Change*, and significantly expanded content access to humanities and social science content, where there are not significant amounts of funds available for new resources. These efforts, added to the Libraries' work to implement the Faculty OA Policy, have resulted in 67% of MIT-authored work published in 2023 being openly available.
- We received a grant of \$500,000 from the Mellon Foundation for a second cohort in the
  postdoctoral research program at the <u>Center for Research on Equitable and Open</u>
  <u>Scholarship (CREOS)</u>.
- We <u>received</u> an National Science Foundation Early-concept Grants for Exploratory Research (EAGER) grant of \$300,000 to explore a transformative model for evaluating open science policies, practices, and interventions. The project is a collaboration between MIT Libraries' CREOS and Incentivizing Collaborative and Open Research

(ICOR).

- The Libraries and the School of Science presented the <u>2023 MIT Prize for Open Data</u> to highlight the value of open data at MIT and encourage the next generation of researchers. Ten winners and 12 honorable mentions were selected from more than 80 nominees representing all five schools and several research centers. The award included a \$2,500 cash prize and an opportunity for the winners to present their research at an event during Open Access Week in October.
- Libraries and MIT Press staff members Chris Bourg, Sue Kriegsman, Nick Lindsay, Heather Sardis, Erin Stalberg, and Micah Altman published the paper "Generative Al for Trustworthy, Open, and Equitable Scholarship," part of a volume of papers on generative Al and its broader impacts written by MIT faculty and researchers and their collaborators. These papers resulted from a call issued by President Sally Kornbluth and Provost Cynthia Barnhart to provide roadmaps, policy recommendations, and calls for action across the broad domain of generative Al.
- In fall 2023, we started working on guidelines for use of library collections by large language models (LLMs). Library collections are highly desirable training materials for LLMs because they are long-form vetted sources of information. Library collections that are licensed from third parties require negotiation of license terms that allows for LLM development, which many publishers are seeking to prohibit or separately monetize. We have built on our existing negotiations to clarify or establish training use where possible. We have also established guidelines for use of digital collections that we directly control, premised on balancing responsible stewardship that respects the wishes of the authors and donors who contribute to our collections, while also allowing broad use.
- This year the Libraries stabilized funding for open access and spent \$2 million on publishing fees for MIT authors. In response to a request from faculty member Justin Reich, the MIT Libraries encouraged many of our Ivy Plus Libraries Confederation (IPLC) colleagues to <u>fund the Open Science Framework preprint server infrastructure</u>. We also supported <u>bioRxiv</u>, a key preprint server in the field of biology, and the underlying source of content for the MIT Press' innovative and award winning <u>Rapid Reviews\Infectious Diseases</u> journal.
- Ten MIT-authored monographs were published open access this year through the support of the MIT Libraries' Open Monograph Fund: Play Between Worlds: Exploring Online Game Culture by TL Taylor; Recovering Armenia: The Limits of Belonging in Post-Genocide Turkey by Lerna Ekmekcioglu; Alternative Shakespeares 3 by Diana Henderson; The Handbook of Rationality by Sotirios Kotsopoulos; Climate Changed: Models and the Built World by Elizabeth Yarina; Fifty Years of Shape Computation (1972-2022) by Sotirios Kotsopoulos; Artful Dodgers: Reconceiving the Golden Age of Children's Literature by Marah Gubar; Raising the Stakes by TL Taylor; Foundations of

Computer Vision by Antonio Torralba; and Computational Intractability: A Guide to Algorithmic Lower Bounds by Erik Demaine.

#### Data-Intensive and Computational Research

We continued to provide critical support for data-intensive and computational research and learning across MIT:

- The Libraries <u>announced the appointment</u> of Peace Ossom as the new Director of Research Data Services, a pivotal and re-envisioned role that will enable us to build off our strong foundation of service offerings in research computing, including workshops, consultations, data collections, and infrastructure.
- The Libraries' Department of Data and Specialized Services (DSS) maintained its collaborative work with the MIT Office of Research Computing (ORCD), engaging in institutional conversations around research data issues via the Research Data Group (co-chaired by the Libraries' Program Head for Data Management Services, and the Office of General Counsel), partnering on faculty consultations on making research data openly available, and hosting their office hours in the GIS & Data Lab. DSS has advanced the working relationship with ORCD through collaboration on implementing a Globus endpoint at MIT. DSS looks forward to deepening these connections by exploring stronger referral partnerships with ORCD and planning training on high performance computing (HPC) to better support researchers transitioning from local computers to HPC in ways that support good data management practices and the mission and vision of MIT and the MIT Libraries.

#### **Essential Core: Physical Collections, Services, and Spaces**

The Libraries invested in physical resources and services that are critical to MIT research, teaching, and community building:

- The Libraries continued to present a vibrant program of community engagement activities, hosting 108 events in the Nexus—Hayden Library's event space—and 18 in the Building 14 Courtyard, drawing an estimated total of more than 4,500 people.
  - MIT Reads is our twice a year, all-MIT reading experience that combines a hybrid speaker event and a series of moderated in-person small group discussions.
     Open to all, MIT Reads aims to build community, foster understanding, and engage our community in solutions-centered discussions on a wide range of complex topics such as amplifying disabilities inclusivity and how to spark the next generation's interest in mathematics.

Last year, we welcomed more than 250 attendees for two events. In Fall 2023, we hosted Alice Wong, disabled activist, media maker, research consultant, and the editor of *Disability Visibility*, to discuss how we must consider more inclusive approaches in support of the disabled community. In the spring, we hosted MIT Assistant Professor of Mathematics <u>John Urschel</u> and author Louisa Thomas to discuss Urschel's memoir outlining his love of math.

- We hosted our second disinformation program on February 29, 2024:
   "Combating Science Misinformation" with Kasisomayajula (Vish) Viswanath,
   Harvard School of Public Health Professor of Health Communications and Chair of the NASEM Consensus Study Committee on Understanding and Addressing Science Misinformation.
- A new event series called Conversations on Academic Freedom and Expression (CAFE), a collaboration between the MIT Libraries and History at MIT, was launched with <u>a talk by Richard Ovenden</u>, Bodley's Librarian at the University of Oxford, in the Nexus at Hayden Library on October 2.
- We greatly enhanced the Nexus' capacity to support hybrid events by implementing a comprehensive suite of AV tools, making the space a versatile "plug-and-play" Zoom room suitable for both high-profile events and smaller groups. Upgrades include a new lectern with integrated technology, an updated PC, expanded microphone support with smart ceiling mics, additional touch screen displays to reduce floor wiring and labor costs, and an upgraded camera system with auto-tracking capabilities to improve the experience for remote attendees.
- The Maihaugen Gallery hosted the exhibit, Under the Lens: Women Biologists and Chemists at MIT 1865-2024, examining the work of women scientists in biology and chemistry at MIT beginning with Ellen Swallow Richards, MIT's first woman student, through the present day. This year, MIT Libraries also launched a new digital exhibit platform, featuring a digital version of Under the Lens.
- The Libraries significantly increased the amount of 24 hour-accessible study space available to the community, expanding 24/7 spaces to include the <u>second floor of Hayden Library</u> and the main floor of <u>Rotch Library</u>.
- In June 2024, the Libraries began a project to upgrade the compact shelving system in the basement stacks of Hayden Library to ensure the accessibility of collections for years to come.
- The Hayden Library and Building 14 Courtyard renovation received an honorable mention in the category of Restoration & Renovation for the 2023 Architecture MasterPrize (AMP), an international architecture award recognizing design excellence.

## Equity, Diversity, Inclusion, and Social Justice (EDISJ)

We continued to center EDISJ through our work and within our organization:

- The Libraries EDISJ governance group focused on research for the recommended associate director role for organizational effectiveness, diversity, inclusion and belonging, part of the Action Plan for Equity, Diversity, Inclusion, and Social Justice.
- The Libraries launched an Accessibility Working Group, another recommendation of the EDISJ Action Plan. The group is charged with identifying how we can best coordinate efforts across the Libraries to reinforce and build upon our strong commitment to accessibility in all aspects of our operations, services, and programs. The team's work will be guided by principles of accessible, universal, and usable design.
- Sylvia Figueroa-Ortiz, the inaugural Association of College and Research Libraries
  Diversity Alliance Administrative Fellow, completed her two-year fellowship with the
  Libraries. She co-managed the growing Community Engagement program while also
  gaining insight on how to serve as a senior leader within an academic library through a
  mentorship with Associate Director of Research, Learning, and Strategic Partnerships
  Alexia Hudson-Ward.
- Deborah Tsogbe, Soala Ajienka, and Rachel Lane were named Women@MIT fellows in the Department of Distinctive Collections. They engaged in archival research to create projects that contribute to greater understanding of the history of women at MIT and in the history of STEM. The exhibit "Sisters in the Making," by Tsogbe and Ajienka, spotlighted the women who built the core rope memory and magnetic core memory for the Apollo Guidance Computer. "Mapping Migration at MIT: Eighteen Stories of International Women at MIT," by Lane, explored how women's work in science crossed international borders through an online story map.

#### **Supporting Activities**

#### People

 Key positions that were vacated included Director of Community Engagement; Librarian for Chemistry, Chemical Engineering, Materials Science and Engineering; Biosciences Librarian; GIS & Data Librarian; Social Science and Management Librarian; Aga Khan Documentation Center Collections Curator; and Program Head for Access Services and Libraries' Learning Spaces.

- We successfully filled the positions of Program Head, Aga Khan Documentation Center (AKDC); Metadata Librarian for Distinctive Collections; Community Engagement Program Manager; Institute Archivist; Director of Research Data Services; Program Head for Enterprise Services; HR Generalist; GIS and Statistics Librarian; Instruction and Outreach Archivist; Institute Records Manager; and Lead Metadata Strategist. We welcomed a total of 20 new staff members.
- The Libraries continued efforts to increase compositional diversity: 25% of new hires in FY2024 were from underrepresented minority (URM) groups (5% Exempt, 20% Non-Exempt). Twenty-four percent of managers in FY2024 were URM.
- We worked to continually improve recruitment and retention rates among Libraries' staff
  through developing a culture of inclusive management, mindful implementation of hybrid
  and remote work for location-agnostic roles, and a continued advocacy for relocation
  packages and related incentives for staff whose work requires them to be on site.

#### Organizational Effectiveness

- There has been significant progress on projects aimed at improving internal communications, led by the cross-directorate Internal Communications Working Group.
  - Five pulse surveys have been conducted to date to measure staff satisfaction with communication around decision-making and priorities, ability to learn about other parts of the organization, sense of belonging, and contribution to the Libraries' mission. Survey results have been guiding working group projects.
  - The group released a set of guidelines for knowledge management, helping staff select appropriate tools for creating, storing, sharing, and archiving information.
  - A high-level inventory of organizational content was completed in preparation for a project to create a new intranet. This project was launched with an initial phase to develop content structure and accessibility and governance guidelines.
  - The working group has also worked more closely with Human Resources on projects including a new staff newsletter, an updated Spot Award process, and collaboration on the design of the pulse surveys.
- An Emergency Management and Environmental Monitoring team was established to oversee the Libraries' emergency preparedness and response efforts.
- The Libraries Inter-directorate Leadership Team (IDL) was charged in 2022 to "to build organizational effectiveness, grow the Libraries' management culture, design and manage delivery of Libraries' services, and build cohesion across the Libraries' portfolio of projects and services." This work of this core group of library operational managers centers upon fostering equity, inclusion, and belonging across our organization, while

also working to balance bandwidth and commitments across the Libraries' core teams. Among their key projects in FY2024 was coordinating with the Libraries' Senior Leadership Team, Human Resources, and other stakeholders on co-creating and stewarding our first AI workplace guidelines which will ensure Libraries staff are utilizing AI in an ethical and responsible manner at work.

#### Infrastructure

- The Libraries' Digital Library Services directorate has continued its fruitful collaboration with MIT Information Systems and Technology (IS&T) to provision hardware for staff, manage shared services, and look for opportunities to collaborate on infrastructure licensing. In FY24, we began a process to move the Libraries' Amazon Web Services (AWS) organization under IS&T's umbrella, both to take advantage of economies of scale and to benefit from IS&T's experience and knowledge in AWS. Likewise, we partnered with IS&T to plan ahead for IS&T's rollout of new SEOS-enabled MobileID chips for MIT ID cards, which are used to access physical services across the Libraries, and to integrate Okta into our extensive authentication infrastructure.
- We have also begun developing partnerships with MIT's new Business and Digital Transformation Office (BDTO), led by <u>Renaud Fornier</u>, collaborating with Fornier's team on the implementation of a new intranet infrastructure, as well as seeking out ways to support and contribute to the BDTO's ambitious plan to update MIT's administrative infrastructure.
- Internally, the Libraries continue to be a standard-bearer for modern, cloud-based, stable library infrastructure, making strategic use of Software as a service (SaaS) and Infrastructure as a service (laaS) solutions to stand up a robust, secure, and extensible platform to support the Libraries' operations.

#### Visiting Committee Meeting

The Libraries' Visiting Committee, chaired by C.J. Whelan III '92, '93, met March 19–20, 2024, in a hybrid format. Session topics included:

- Al, Data, and Computation
- Open and Equitable Scholarship
- CREOS Research
- Community Engagement
- Organizational Effectiveness and Belonging

The Committee praised the Libraries for their excellent progress on the strategic vision outlined in the MIT Future of Libraries Task Force report, highlighting the Libraries' strong role as a trusted partner in MIT's AI, data, and computation efforts, their stewardship of valuable collections, their commitment to becoming an innovative, digital-first library, and their leadership

in open and equitable scholarship. The Libraries were described as "truly world class." The Committee also noted that the key challenges and opportunities ahead include navigating the implications of AI on data cataloging, enhancing community engagement, and advancing efforts in open and equitable scholarship.

#### Fundraising

The MIT Libraries raised a total of \$2,227,160, including a \$500,000 grant for the Center for Research on Equitable and Open Scholarship, in FY2024. The Libraries have completed our fundraising commitment for the Building 14 Courtyard renovation. After a four-year hiatus, we returned as a participant in the MIT 24-Hour Challenge, raising \$29,057 to support our <a href="https://www.women@MIT Archival Initiative">Women@MIT Archival Initiative</a>.

Chris Bourg
Director of Libraries