News from the MIT Libraries

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Design

Pentagram

From the Director

In this issue of *Bibliotech*, we highlight two recent initiatives that perfectly encapsulate the role and opportunity of research libraries today. Each reflects the increasingly data-intensive and computational nature of our work, while also highlighting the unique power of libraries to bring people together across disciplines.

The inaugural MIT Prize for Open Data (p. 06) was conceived not only to recognize MIT researchers who make their data openly available to others, but also to connect open data practitioners and advocates across the Institute. As gratifying as it was to reward these 10 outstanding research projects at our Open Data @ MIT event, it was equally invigorating to see all the conversation and connections sparked that afternoon.

Creative coder Andreas Refsgaard's artist residency at Lewis Music Library (p. 12) was not only an exploration of the artistic potential of machine learning, it drew people from across MIT's schools to engage in playful experimentation. It celebrated libraries as a place for creativity and community.

As ever, I'm grateful that you are a part of our community. New programs like these would not be possible without your generosity and support of our vision. Together we celebrate the power of Libraries to enable groundbreaking research and creative collaboration at MIT and beyond.



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Celebrating Open Data

New prize program recognizes MIT researchers who make data openly accessible and reusable

The inaugural MIT Prize for Open Data, which included a \$2,500 cash prize, was awarded to 10 individual and group research projects last fall. Presented jointly by the School of Science and the MIT Libraries, the prize recognizes MIT-affiliated researchers who make their data openly accessible and reusable by others. The prize winners and 16 honorable mention recipients were honored at an event held October 28 at Hayden Library.

"By launching an MIT-wide prize and event, we aimed to create visibility for the scholars who create, use, and advocate for open data," says Rebecca Saxe, associate dean of the School of Science and John W. Jarve (1978) Professor of Brain and Cognitive Sciences. "Highlighting this research and creating opportunities for networking would also help open-data advocates across campus find each other."

Winners and honorable mentions were chosen from more than 70 nominees, representing all five schools, the MIT Schwarzman College of Computing, and several research centers across MIT. A committee composed of faculty, staff, and a graduate student made the selections.

Image

Prize recipient Pedro Reynolds-Cuéllar presents his research at the Open Data@MIT event; photo by Bryce Vickmark. "Open data accelerates scholarly progress and discovery, advances equity in scholarly participation, and increases transparency, replicability, and trust in science."

-Chris Bourg

2022 Winners, MIT Prize for Open Data

Yunsie Chung, graduate student in the Department of Chemical Engineering, won for SolProp, the largest open-source dataset with temperature-dependent solubility values of organic compounds.

Matthew Groh, graduate student, MIT Media Lab, accepted on behalf of the team behind the Fitzpatrick 17k dataset, an open dataset consisting of nearly 17,000 images of skin disease alongside skin disease and skin tone annotations.

Tom Pollard, research scientist at the Institute for Medical Engineering and Science, accepted on behalf of the PhysioNet team. This datasharing platform enables thousands of clinical and machine-learning research

studies each year and allows researchers to share sensitive resources that would not be possible through typical data sharing platforms.

Joseph Replogle, graduate student with the Whitehead Institute for Biomedical Research, was recognized for the Genome-wide Perturbseq dataset, the largest publicly available, singlecell transcriptional dataset collected to date.

Pedro Reynolds-Cuéllar,

graduate student with the MIT Media Lab/Art, Culture, and Technology, and Diana Duarte, co-founder at Diversa, won for Retos, an opendata platform for detailed documentation and sharing of local innovations from underresourced settings.

Maanas Sharma, an undergraduate student, led States of Emergency, a nationwide project analyzing and grading the responses of prison systems to Covid-19 using data scraped from public databases and manually collected data.

Djuna von Maydell, graduate student in the Department of Brain and Cognitive Sciences, created the first publicly available dataset of single-cell gene expression from postmortem human brain tissue of patients who are carriers of APOE4, the major Alzheimer's disease risk gene.

Raechel Walker, graduate researcher in the MIT Media Lab, and her collaborators created a Data Activism Curriculum for high school students through the Mayor's Summer Youth Employment Program in Cambridge, Massachusetts. Students learned how to use data science to recognize, mitigate, and advocate for people who are disproportionately impacted by systemic inequality.

Suyeol Yun, graduate student in the Department of Political Science, was recognized for DeepWTO, a project creating open data for use in legal natural language processing research using cases from the World Trade Organization.

Jonathan Zheng, graduate student in the Department of Chemical Engineering, won for an open IUPAC dataset for acid dissociation constants, or "pKas," physicochemical properties that govern how acidic a chemical is in a solution.

Image
Left to right:
Chris Bourg, Suyeol Yun,
Raechel Walker, Matthew
Groh, Djuna von Maydell,
Maanas Sharma, Tom
Pollard, Pedro ReynoldsCuéllar, Nergis Mavalvala,
and Rebecca Saxe.

Not in picture: Yunsie Chung, Joseph Replogle, and Jonathan Zheng; photo by Bryce Vickmark.



Machine Learning and the Arts

For two weeks in fall 2022, the Lewis Music Library hosted Andreas Refsgaard, a Copenhagen-based creative coder, interaction designer, and educator selected as a 2022–23 Center for Art and Technology (CAST) Visiting Artist. Initiated by Avery Boddie, Lewis Music Library department head, Refsgaard's residency reflects the library's focus on digital collections and music technology.

"In a lot of my work, I try to delegate creative decisions to algorithms. I try to make systems where I don't necessarily know what the result will be," says Refsgaard. This element of surprise is infused throughout the artist's work, alongside a playful approach that seeks to make machine learning tools more accessible to all.

Two of Refsgaard's creations—both exemplifying his unique humor—were installed in Lewis throughout the fall term. In the interactive project *Doodle Tunes*, users draw a piano, drums, bass guitar, or saxophone on a touchscreen, prompting the program to play that instrument's sound. As more instruments are added, the composition becomes more complex. In *Sounds from the Mouth*, when the participant faces a webcam and opens their mouth, an autonomous snapshot is created which bounces off a piano, creating a cascading series of notes. Caleb Hall, music technology and digital media librarian, collaborated with Refsgaard to create a custom set of sounds for the installations.

As part of his visit to MIT, Refsgaard also presented a public artist talk and visited classes on music and technology as well as the MIT laptop ensemble. He led two creative workshops, open to novices as well as experts, which drew participants not only from Music and Theater Arts, but Sloan School of Management, the Schwarzman College of Computing, and beyond.

"In addition to serving as a space for quiet study and access to physical resources, we want the library to be a place where users congregate, collaborate, and explore together," says Boddie. "This residency was very successful in that regard."

To watch a video about Refgaard's residency or play *Doodle Tunes* and *Sounds from the Mouth*, visit *arts.mit.edu/creative-continuum*.



"In a lot of my work, I try to delegate creative decisions to algorithms. I try to make systems where I don't necessarily know what the result will be," -Andreas Refsgaard

Open Access Stories

See what readers from around the globe have said about articles shared through the MIT Faculty Open Access Policy.



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IAP by the Numbers

MIT's Independent Activities Period (IAP) is a four-week period in January during which faculty and students are freed from the rigors of regularly scheduled classes for flexible teaching and learning and for independent study and research. The MIT Libraries offer a range of workshops each IAP, with topics ranging from tips for thesis authors to research computing skills to environmental justice through data.

36

Workshops offered by the MIT Libraries in 2023

45

Instructors from across the Libraries staff

690

Participants in Libraries workshops

Staff News

New Appointments

Rami Alafandi Aga Khan Documentation Center Collections Curator

Claire Berman Engineering Librarian

Francesca Bozor Access Services Associate

Gwendolyn Collaço Aga Khan Documentation Center Collections Curator

Josh Daranciang *Administrative Assistant*

Evgenia Diakonenko Metadata Associate

Hannah Frazee
Access Services Assistant

Kevin Grant
Access Services Associate

Ariel Hammel Metadata Quality Assurance Associate

Amanda Hawk Public Services Manager Sarah Kurpiel

Electronic Resources Associate

Jake Lewis

Access Services Assistant

Jessa Modell

Resource Sharing Associate

Erica Moore

Access Services Associate

Palak Patel

Internal Communications

Coordinator

Stephanie Richardson Associate Director for Administrative Services

Allison Schmitt
Public Services Assistant

Becca Tibbitts

Processing Associate

Steven Vinolas

Music Library Assistant

Cam West

Access Services Assistant

Jaclyn Wilson Access Services Manager

Retirements

Stephanie Houston
Tangible Serials Acquisitions Assistant

What's New

Image

Ellen Swallow Richards and Louisa Hewins at Middlesex Fells, May 7, 1899. Journal of Louisa Hewins, "Excursions: Boston and Vicinity," 1896–1899, Collection on Ellen Swallow Richards, Distinctive Collections.

News from the Women@MIT Archival Initiative

Launched in 2017, the initiative seeks to add the records of women faculty, staff, students, and alumnae to the historic record by collecting, preserving, and sharing their life and work with MIT and global audiences.

To celebrate the 150th anniversary of Ellen Swallow Richards being the first woman to graduate from MIT, Distinctive Collections staff have finished digitizing the collections on Richards and the Massachusetts Institute of Technology Woman's Laboratory, making 77 folders' worth of materials available on the early history of women at MIT. In addition, the records of the Women's and Gender Studies Program have been processed and are open for research.

The initiative will once again host a fellowship program, inviting scholars, activists, artists, musicians, writers, and others to propose projects that showcase the Women@MIT collections in informative and engaging ways, contributing to the greater understanding of the history of women at the Institute and in STEM. In 2021 the first Women@MIT fellows, multimedia artists Mariana Roa Oliva and Maya Bjornson, created "A Lab of One's Own," an immersive video game in which players encounter archival materials that tell the stories of women from MIT's history.

Follow the MIT Libraries on Instagram (@mitlibraries) to see highlights from the collections on "Women at MIT Wednesdays."

The Women @MIT Arching Unity thing is governed by supported by

The Women@MIT Archival Initiative is generously supported by Barbara Ostrom '78 and Shirley Sontheimer.





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