

2024 Forum on Future of World Academic Library (WAL), 24-27 June 2024, Beijing

The University of Hong Kong Libraries

Journey to Support Open Science

HKU Libraries' Experience

Tina Yang,
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Outline



Overview of HKU and HKUL



Open Science at a Glance



HKU Libraries Open Science Initiatives

Open access publishing

Open data

Training and advocacy



Key takeaways

Part I



Overview of HKU and HKUL



Open Science at a Glance



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Open access publishing

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Training and advocacy



Key takeaways

The University of Hong Kong

Founded in 1911



Research intensive



Doctorate granting



10 faculties



39,166 students



9,068 staff members



• Architecture



• Arts



• Business and Economics



• Dentistry



• Education



• Engineering



• Law



• Medicine



• Science



• Social Sciences



University Libraries

- Founded in 1912
- Advances the **teaching and learning, research, and knowledge exchange** pursuits of the University through its outstanding resources, people-centred services as well as its innovative and collaborative approaches.



Part II



Overview of HKU and HKUL



Open Science at a Glance



HKU Libraries Open Science Initiatives

Open access publishing

Open data

Training and advocacy



Key takeaways

What is Open Science?

- aims to make **scientific research** from all fields **accessible to everyone** for the benefits of scientists and society as a whole.
- makes sure **not only** that **scientific knowledge** is accessible but also that **the production of that knowledge** itself is inclusive, equitable and sustainable.
- helps solve complex social, environmental and economic challenges and achieve the **Sustainable Development Goals**.

Four Pillars of Open Science



Open Science - Benefits

Accessibility: fosters a more inclusive scientific community by making research and data available to all, promoting citizen science, and democratizing the scientific process.

Efficiency and Innovation: encourages cleaner code, more contributors, and long-term maintenance, leading to more innovative and financially sustainable research.

Reproducibility: increases the transparency and reliability of research results, leading to more robust scientific methods.

Diversity and Inclusion: by breaking down financial and systemic barriers, open science allows for a more diverse group of researchers and equitable opportunity.

Quality: wider evaluation of research through open peer review processes improves the reproducibility and validation of data.

Collaboration: enhances national and global collaboration, speeding up knowledge transfer and addressing broader societal issues

Part III



Overview of HKU and HKUL



Open Science at a Glance



HKU Libraries Open Science Initiatives

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Open data

Training and advocacy



Key takeaways



Open access publishing - HKU mandate

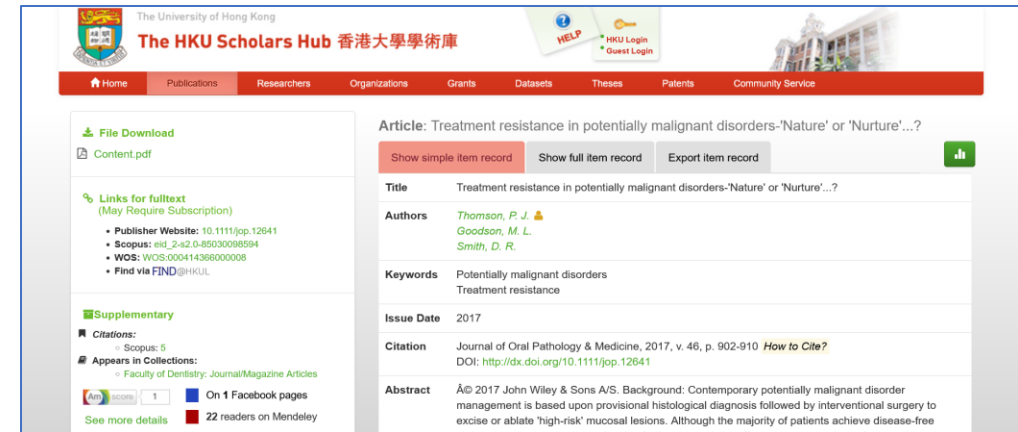
- HKU is a signatory to the *Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities* since 2009
- recognizes that information should be made widely and readily available to society
- requires researchers to deposit a copy of articles in an open access repository
- advocates open access publication, including original scientific research results, raw data and metadata, and more



- HKU OA Policy and OAFunders. <https://libguides.lib.hku.hk/c.php?g=937896&p=6786956>
- Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities. <https://openaccess.mpg.de/Berlin-Declaration>

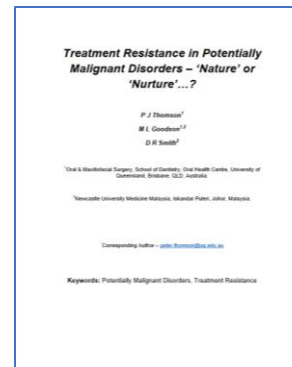
Green open access - HKU Scholars Hub

- HKU Scholars Hub (<http://hub.hku.hk/>)
- HKU's institutional repository since 2005
- Collects, preserves, and disseminates the intellectual output of HKU
- Aims to enhance the visibility of HKU authors and their research, and to foster opportunities for collaboration
- Provides open access to accepted manuscripts (pending publisher's policy)
- Authors can attach the accepted manuscripts and include them in the Hub when imputing research outputs details in the HKU Research Information Management System (RIMS) .



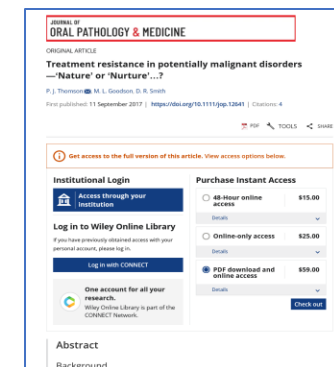
Self-archived version:

<https://hub.hku.hk/handle/10722/249171>



Published version requiring subscription:

<https://doi.org/10.1111/jop.12641>



- Palmer, D. T., de Castro, P., Bollini, A., & Mennielli, M. (2015). The once & future repository, HKU's Scholars Hub. Open Repositories, Indianapolis, Indiana.
<https://hub.hku.hk/handle/10722/210397>

HKU Scholars Hub - Challenges

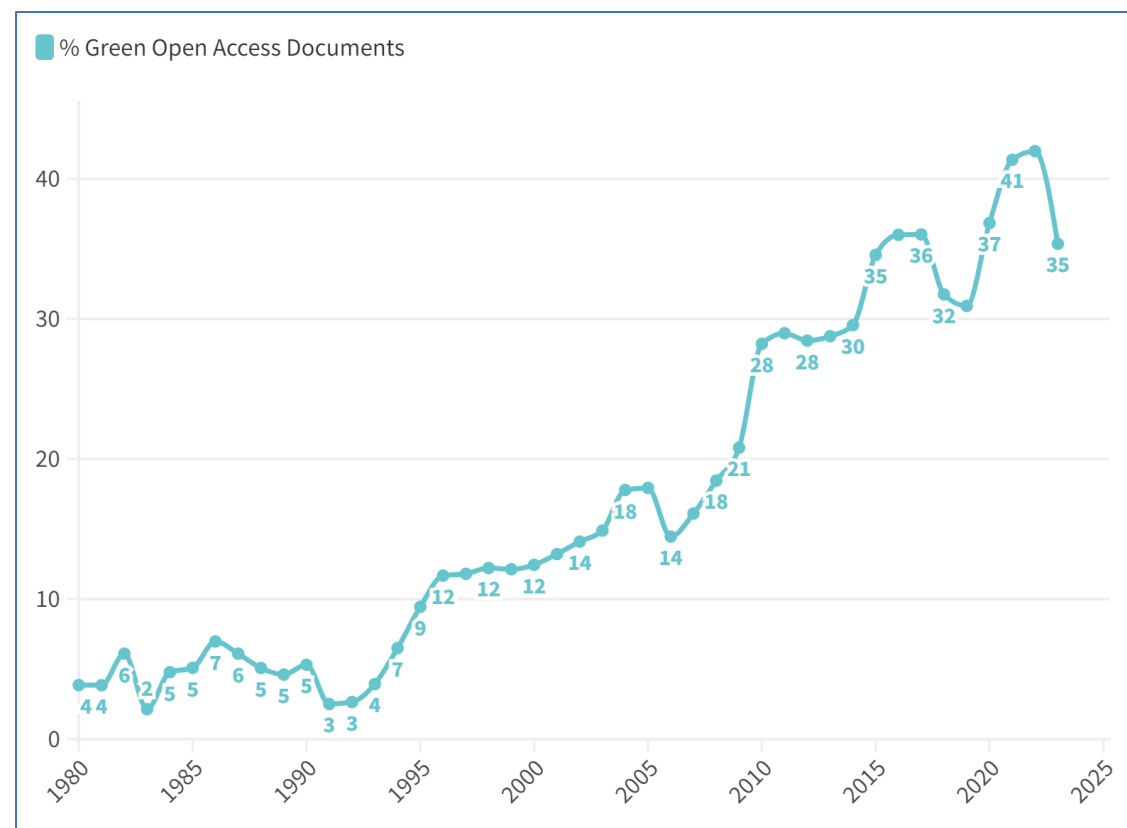
- Insufficient manpower to support the infrastructure (especially with an ever-declining library budget)
- Extra fundings for subscription to external resources to enhance functionality



Note. Image generated using the prompt "one chef and five burning pots, by Alfred Kubin" by OpenAI, DALL-E, 2023 (<https://dalle.hku.hk/>).

Green open access - Outcome

- Percentage of all green OA documents among all documents by HKU authors indexed by Web of Science in 1980-2023
- An evident general upward trend of uptake of green OA
- Surged from 3.86% in 1980 to 35.35% in 2023
- Drop in 2023, possibly due to enhanced coverage of Gold OA via Transformative agreements

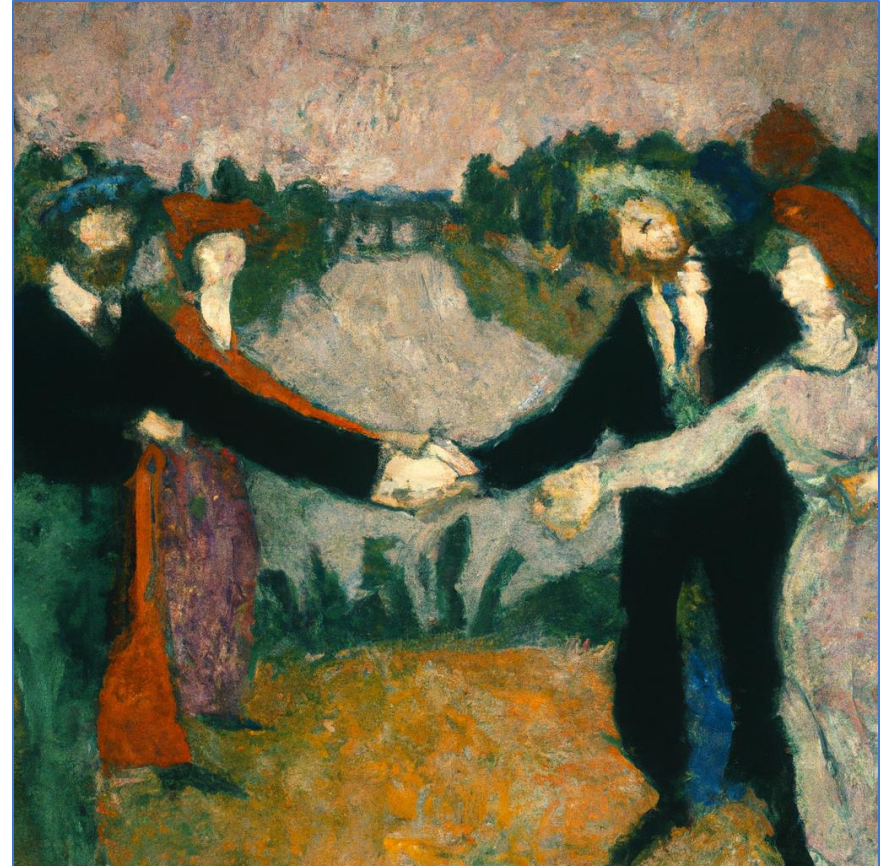


Notes:

- Dataset: InCites Dataset + ESCI
- Open Access: [Green Submitted, Green Published, Green Only, Green Accepted]
- Date Retrieved: 17 June 2024

Green open access - The way forward

- Continue building infrastructure which supports green open access
- Draw on expertise of the HKU Libraries' colleagues, especially the metadata team for creating, managing, and sharing reliable metadata
- Collaborate with campus units to maintain, enhance, and promote HKU Scholars Hub



Note. Image generated using the prompt "four people shaking hands, by Monet" by OpenAI, DALL-E, 2023 (<https://dalle.hku.hk/>).

Gold open access - Transformative agreements (TA)

- Read and Publish Agreements
- Flipping a part of the journal subscription fees (paid by Libraries) to support open access APC
- HKU researchers publishing in open access for **free** in the covered journals
- Our first TA with Karger from 2021
- Latest ones with Springer Nature (Springer hybrid journals) and the Company of Biologists in 2024

Publishers (In alphabetical order)	Number of journal titles covered (Retrieved 17 June 2024)
<u>Cambridge University Press</u>	415
<u>Cold Spring Harbor Laboratory Press</u>	5
<u>Company of Biologists</u>	5
<u>IOP Publishing</u>	68
<u>Karger</u>	94
<u>Microbiology Society</u>	6
<u>Portland Press</u>	7
<u>Springer Nature - Springer Hybrid Journals</u>	1970
<u>Wiley</u>	1904
Sum	4474

Transformative agreements (TA) - Outcome

- In 2023 alone, **363 articles** supported
- Reached audience from all over the world
- **1,411 X** (formerly Twitter) posts about the articles by **1,089 unique X users** in **66 countries (regions)**, e.g., United States, China's Hong Kong, , United Kingdom, Germany, Canada, and more notably, the Global South

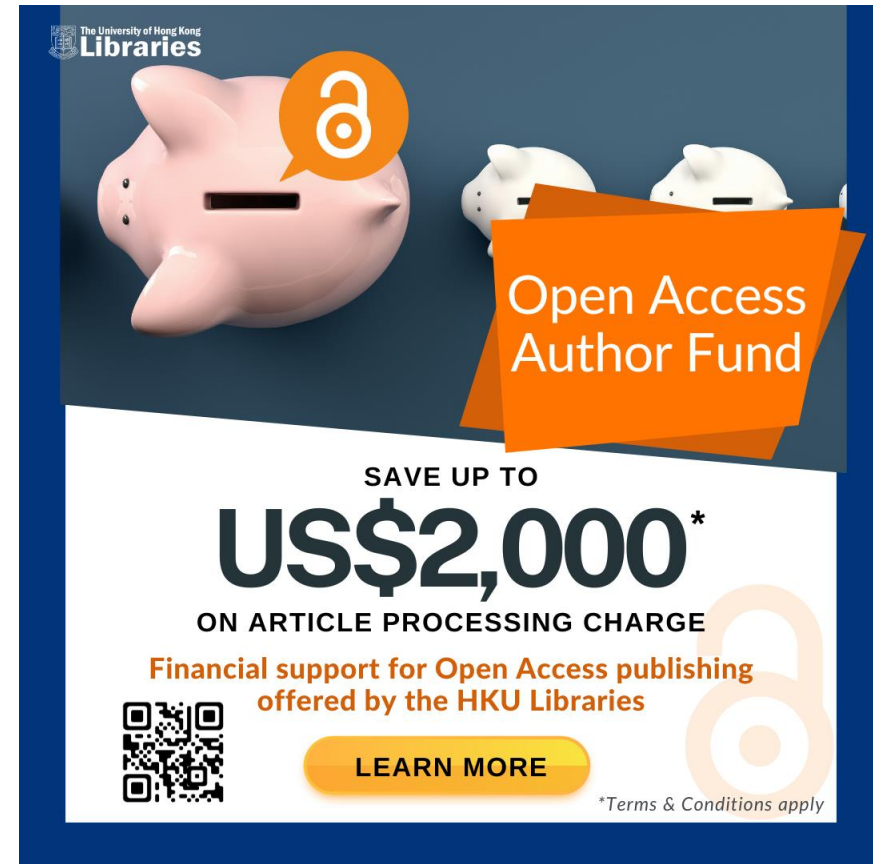
Note: Retrieved 18 June 2024 from Altmetric Explorer

Transformative agreements (TA) - Challenges

- **Administrative costs:** Different publishers use different platforms and require specialist staff to manage them.
- **Long-term sustainability** of APC-based models based on accelerating costs: Average APC for Hybrid OA articles in 2015 was US\$2867 and US\$3336 in 2022 (+16.4%). That of Gold ones increased considerably from US\$1517 in 2015 to US\$1962 in 2022 (+29.3%).
- **Low transformation rate:** Based on the journal flipping rates observed between 2018 – 2022, it would take at least **72 years** for the big five publishers (Wiley, Springer Nature, Sage, Elsevier, and T&F) to flip their TA titles to OA.

Gold open access - HKU Libraries Open Access Author Fund

- Funding to support open access APC for articles not covered in Transformative Agreements
- Began in November 2022
- Corresponding authors who are current HKU academic/research staff & postgraduates
- One author, one article per year
- For actual expenses for APC, up to US\$2000




The University of Hong Kong
Libraries

Open Access
Author Fund

SAVE UP TO
US\$2,000*
ON ARTICLE PROCESSING CHARGE

Financial support for Open Access publishing
offered by the HKU Libraries

 [LEARN MORE](#)

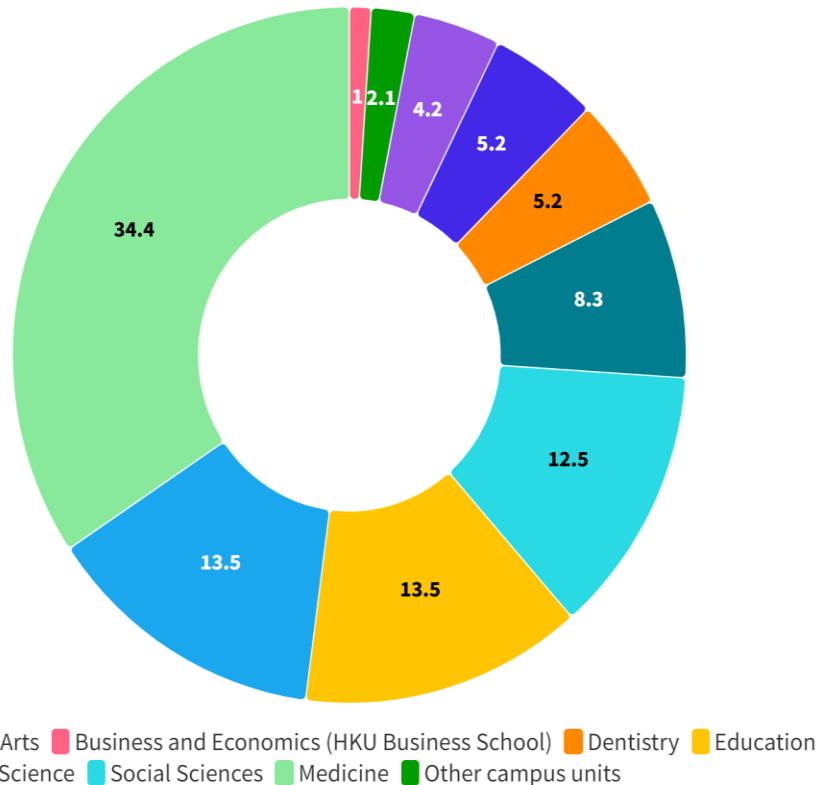
*Terms & Conditions apply

The graphic features a large pink piggy bank with an orange padlock icon above it, and two smaller white piggy banks behind it. The background is dark blue with a white banner at the bottom containing the text and QR code.

HKU Libraries Open Access Author Fund - Outputs

- In 2023-24 financial year, **96** articles supported
- Supported HKU members across various faculties
- Most notably Medicine (34.38%), Education (13.54%) and Science (13.54%)

- Reached audience from all over the world
- **554 X posts** about this content by **493 unique X users** in **37 countries (regions)**



Note: Retrieved 18 June 2024 from Altmetric Explorer

Percentage of successful applications in 2023-24 by Faculty

Note: Retrieved 18 June 2024

HKU Libraries Open Access Author Fund - Challenges

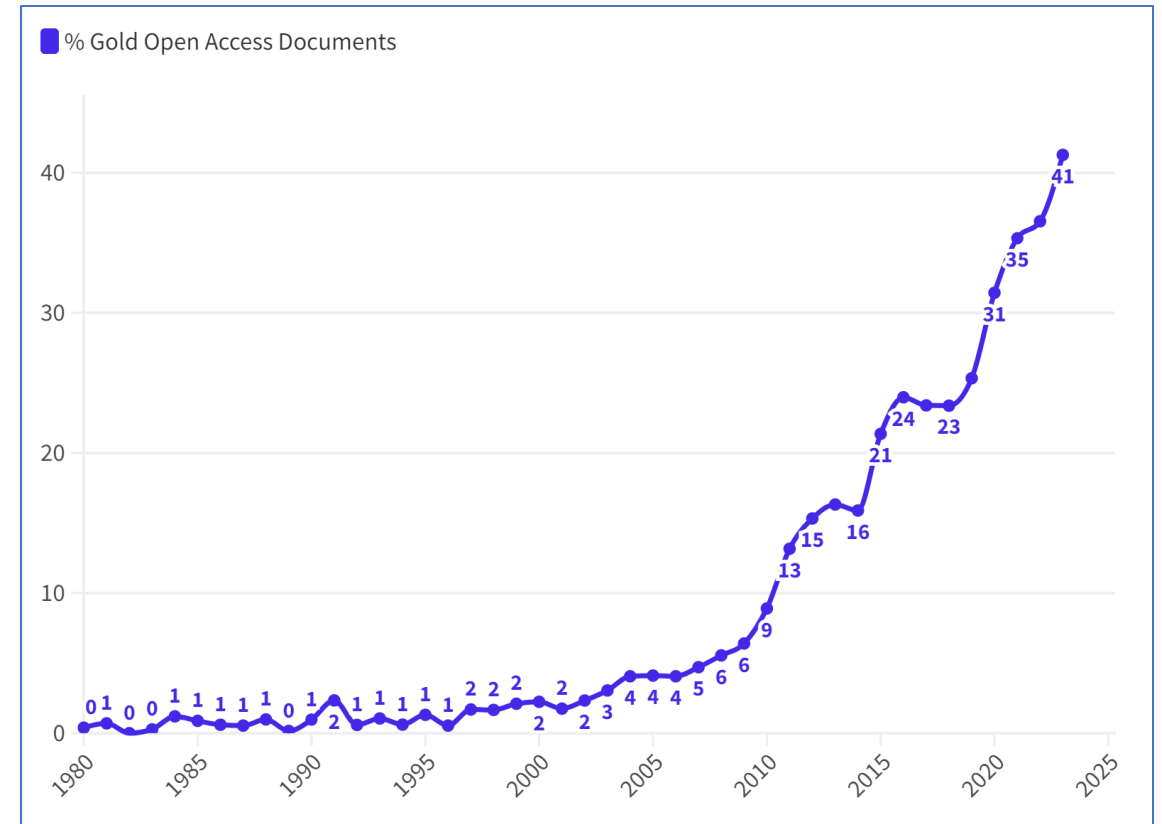
- Insufficient funding:
Suspended from 1 July 2024.
The fund solely came from Libraries' resource fund, which was faced with **significant budget cuts** three years in a row
- Administrative cost: Required **dedicated staff** to handle applications and enquiries



Note. Image generated using the prompt "gold coins and skull by Maria van Oosterwyck" by OpenAI, DALL-E, 2023 (<https://dalle.hku.hk/>).

Gold open access - Outcomes (Number of documents)

- Percentage of Gold OA documents among all documents by HKU authors indexed by Web of Science in 1980-2023
- An evident general upward trend of number of gold OA articles
- Surged from 0.39% in 1980 to 41.27% in 2023

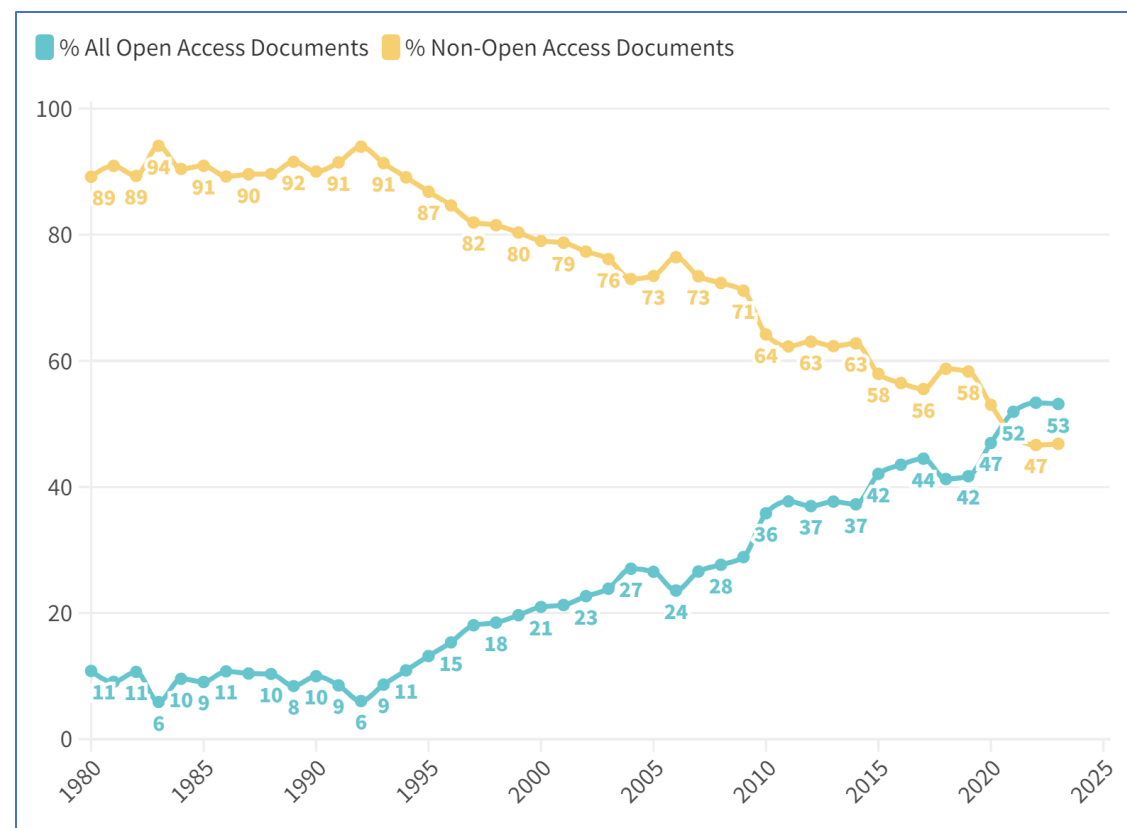


Notes:

- Dataset: InCites Dataset + ESCI
- Open Access: [Gold, Gold - Hybrid]
- Date Retrieved: 17 June 2024

Open access (all types) - Outcomes (Number of documents)

- Percentage of OA (all type) and non-OA documents by HKU authors indexed by Web of Science in 1980-2023
- An evident general upward trend of number of OA articles
- **Surged from 10.81% in 1980 to 53.16% in 2023**
- Downward trend for non-OA articles
- Percentage of OA articles (51.92%) first became **higher** than that of non-OA ones (41.08%) in 2021

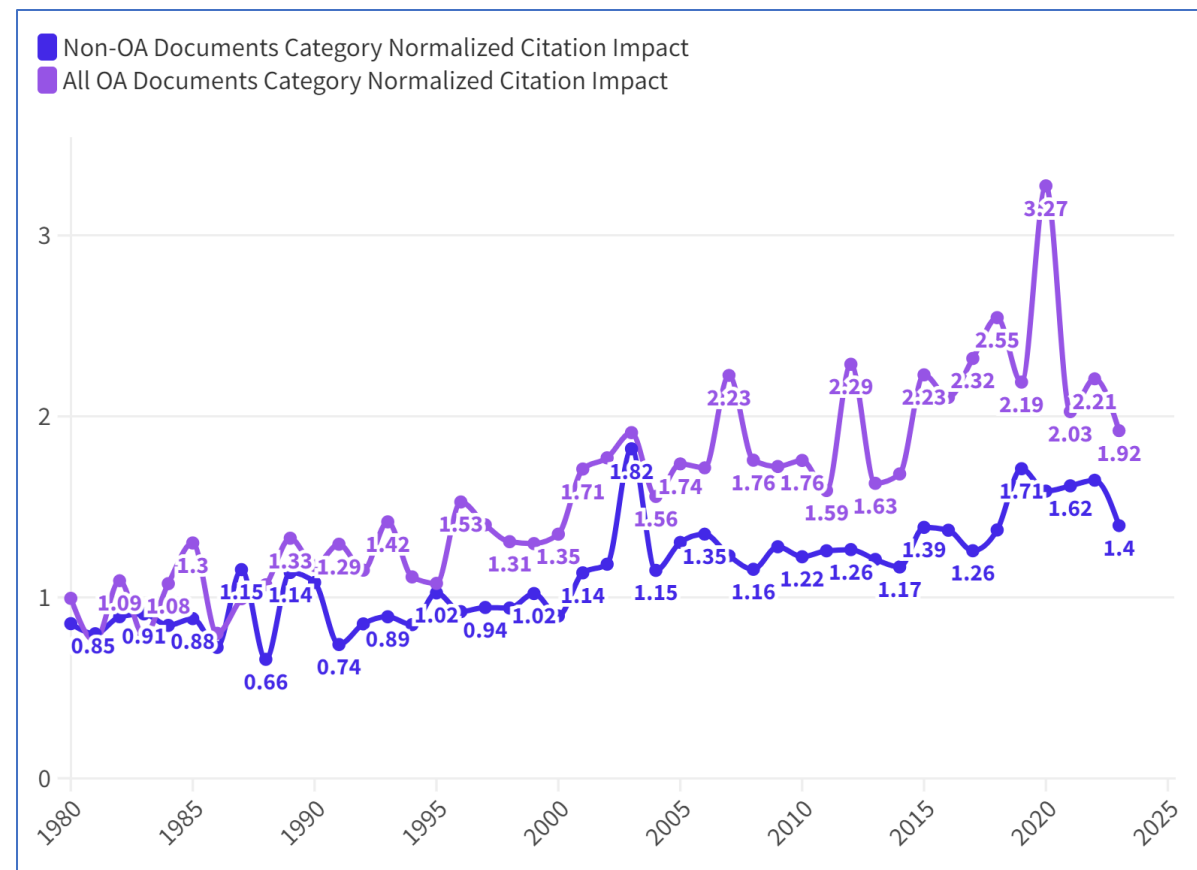


Notes:

- Dataset: InCites Dataset + ESCI
- Open Access: [All open access]
- Date Retrieved: 17 June 2024

Open access (all types)- Outcomes (Citation impact)

- CNCI of OA documents by HKU authors compared with non-OA documents indexed by Web of Science in 1980-2023
- CNCI: an indicator based on times cited, irrespective of age, subject, or document type. A CNCI value of 1 represents performance at par with world average.
- Generally, CNCI for OA articles **higher** than that of non-OA ones
- More **significant** advantage of OA articles in recent years
- Possible positive impact on exposure and citations lead by open access



Notes:

- Dataset: InCites Dataset + ESCI
- Open Access: [All open access]
- Date Retrieved: 17 June 2024

Open access - The way forward

- cOAlition S: Confirms the **end of its financial support** for OA publishing under **transformative arrangements** after 2024; Supports more innovative and **community-led** OA publishing initiative
- Jisc: Calls for **divestment** from agreements that do not meet the sector's requirements; Works for **new** scholarly publishing models that are sustainable and deliver the open research services
- Bill & Melinda Gates Foundation: From 2025, **discontinues** support for publishing fees, such as APCs; Requires **preprints** and encouraging preprint review

• Bill & Melinda Gates Foundation. (2024). Policy Refresh 2025 Overview Retrieved June 16 from <https://gatesfoundationoa.zendesk.com/hc/en-us/articles/24810787662100-Policy-Refresh-2025-Overview>

• Brayman, K., Devenney, A., Dobson, H., Marques, M., & Vernon, A. (2024). A review of transitional agreements in the UK. <https://doi.org/10.5281/zenodo.10787392>

• cOAlition S. (2023). cOAlition S confirms the end of its financial support for Open Access publishing under transformative arrangements after 2024. Retrieved June 13 from <https://www.coalition-s.org/coalition-s-confirms-the-end-of-its-financial-support-for-open-access-publishing-under-transformative-arrangements-after-2024/>

Open access publishing - The way forward at HKU

- Infrastructure: Build OA **infrastructure** that makes research readily available to wider audience, e.g., continuing development of HKU Scholars Hub (Green OA)
- Sustainability: Participate in **new sustainable publishing models** which enables immediate OA, e.g., Subscribe-to-Open
- Collaboration: Work with **internal and external partners** to demonstrate a commitment to equity, e.g., partnership with HKU Press



Annual Reviews, Subscribe to Open.
<https://www.annualreviews.org/page/subscriptions/subscribe-to-open>.
(CC-BY-SA 1.0)

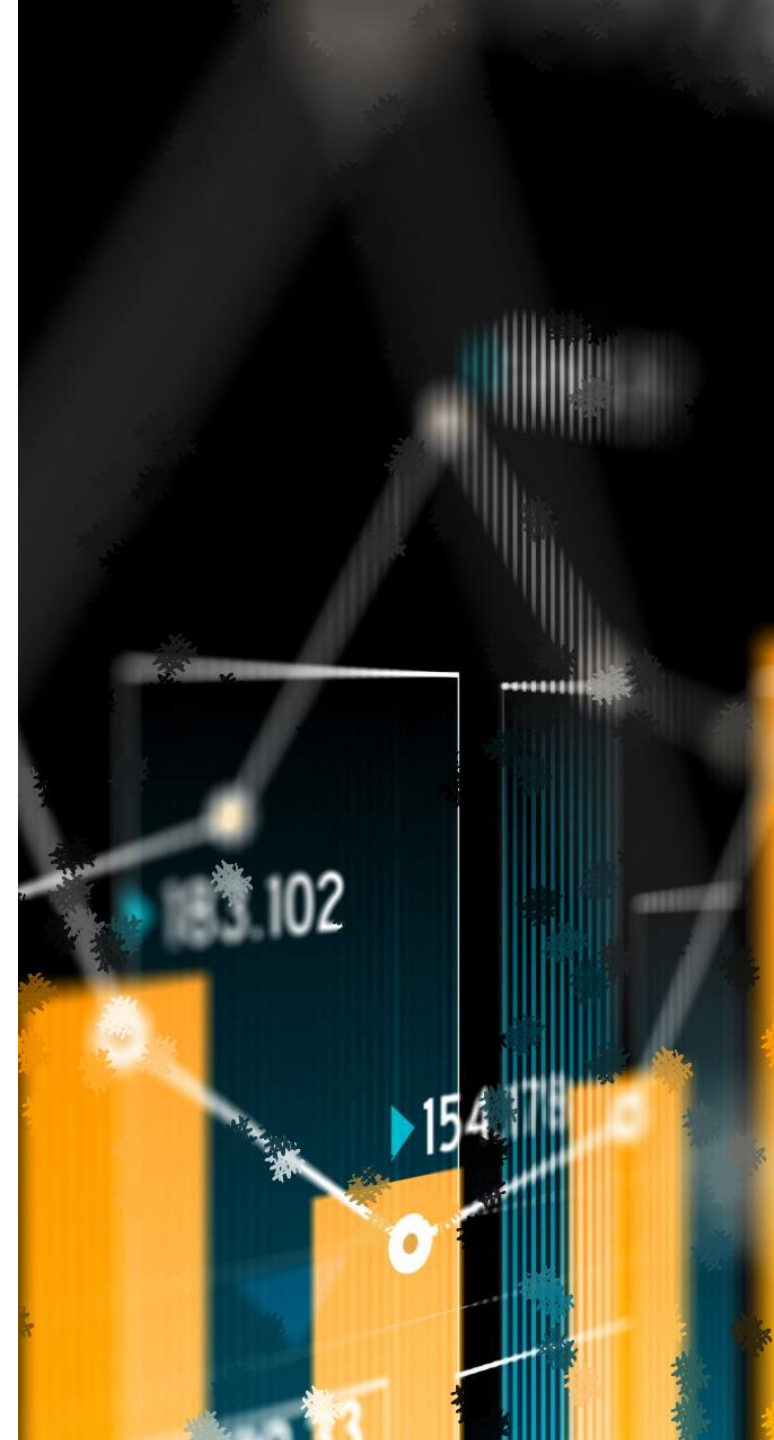


Open data

- DataHub, <https://datahub.hku.hk>, the HKU institutional data repository powered by Figshare, launched in August 2020

Objectives:

- Establish a central point of access to data collections created by HKU scholars and students
- Increase visibility of research data produced at the University
- Facilitate open data by providing infrastructure support



DataHub - Features support FAIR

Findable

- Unique, citable DOIs assigned to published items
- Indexed on various databases, e.g. Google dataset, Dimensions

Accessible

- Support publishing data Open Access

Interoperable

- Use common metadata elements from DataCite schema
- Use controlled vocabularies, e.g. ANZSRC Fields of Research

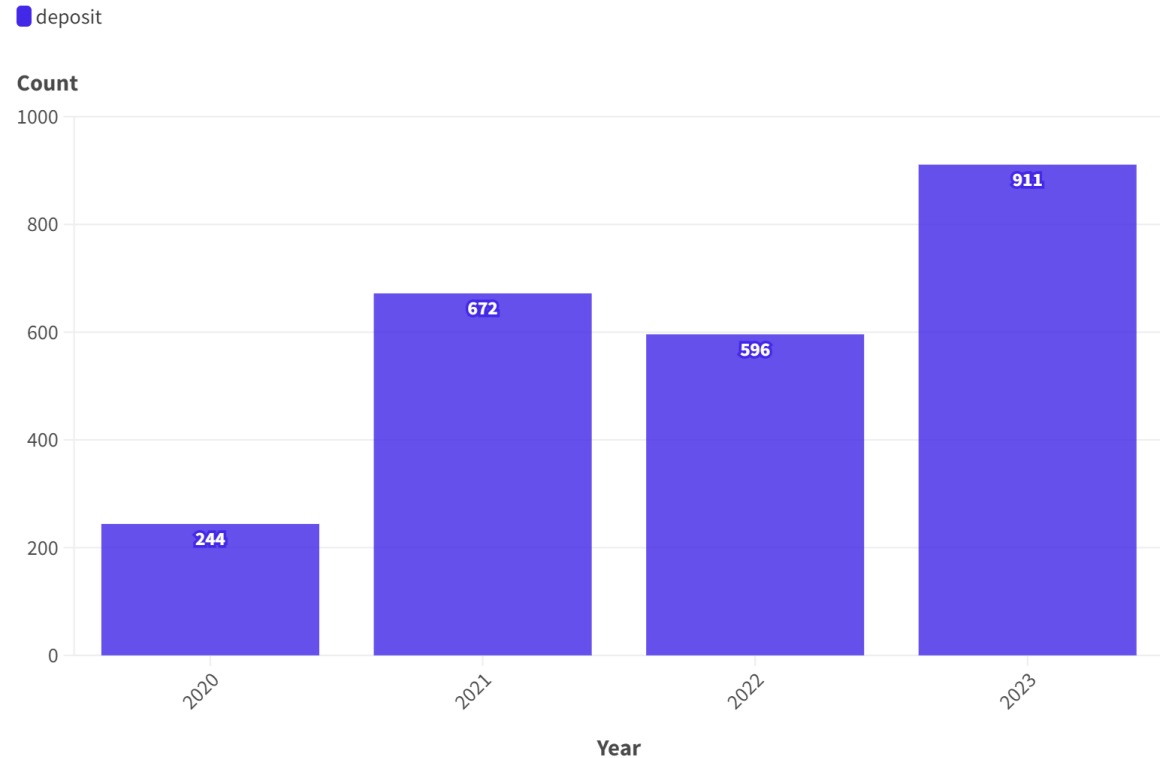
Reusable

- Items are published with open licenses, e.g. Creative Commons licenses

DataHub - Usage

- Recorded a total of **2,849** deposits from August 2020 to December 2023
- A steady increasing trend in the number of deposits by year
- 85% of the deposits are *datasets*

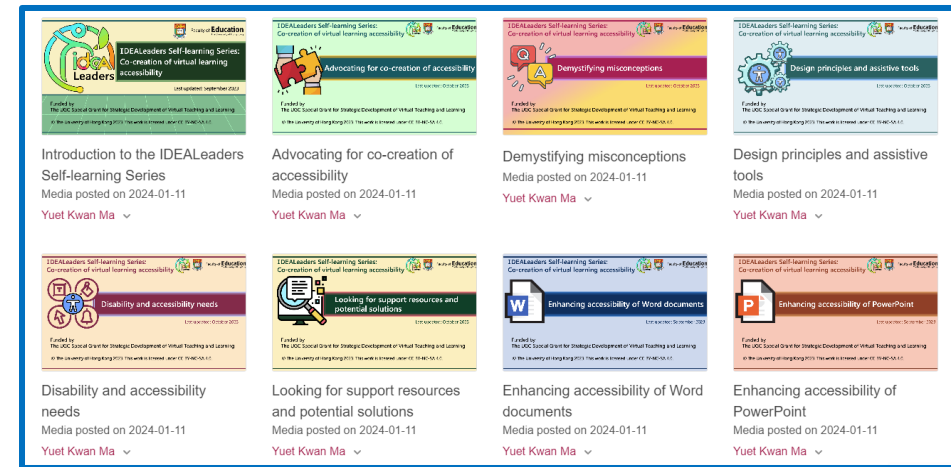
No. of deposit in DataHub 2020-2023



Date Retrieved: 17 June 2024

DataHub – Open access for digital project data

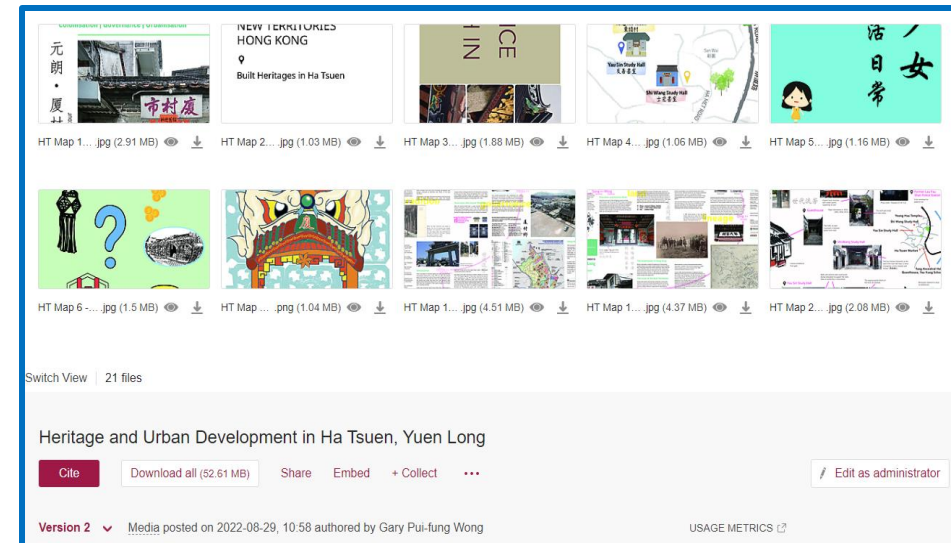
- Worked with HKU faculty members in publishing project materials, data, and collections



The IDEALeader Project: <https://doi.org/10.25442/hku.c.6605497>



The BRINFAITH Project:
<https://datahub.hku.hk/brinfaith>



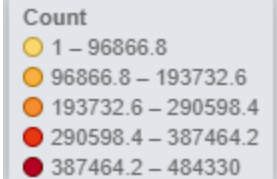
Heritage and Urban Development Collection:
<https://doi.org/10.25442/hku.22085738>

DataHub - Outreach

Item views and downloads (combined)

Date Retrieved: 17 June 2024

- Reached audience from the United States (602,188), China's Hong Kong (79,629) and the United Kingdom (50,128) the most. Other regions include China, Russia, Netherlands, Germany, Singapore, etc.



DataHub - Challenges and opportunities

- Challenges in engaging researchers to share their research data openly
- Difficult or require **enormous resources** to understand the overall picture of data sharing activities at the University
- Seek opportunities to collaborate and connect with faculties in engagement activities
- Explore the use of AI or advanced technologies

Open data - The way forward

University Policy

- Continue to provide support to implement the university's policy on research data and records management

Funder's Data Sharing Pilot Scheme

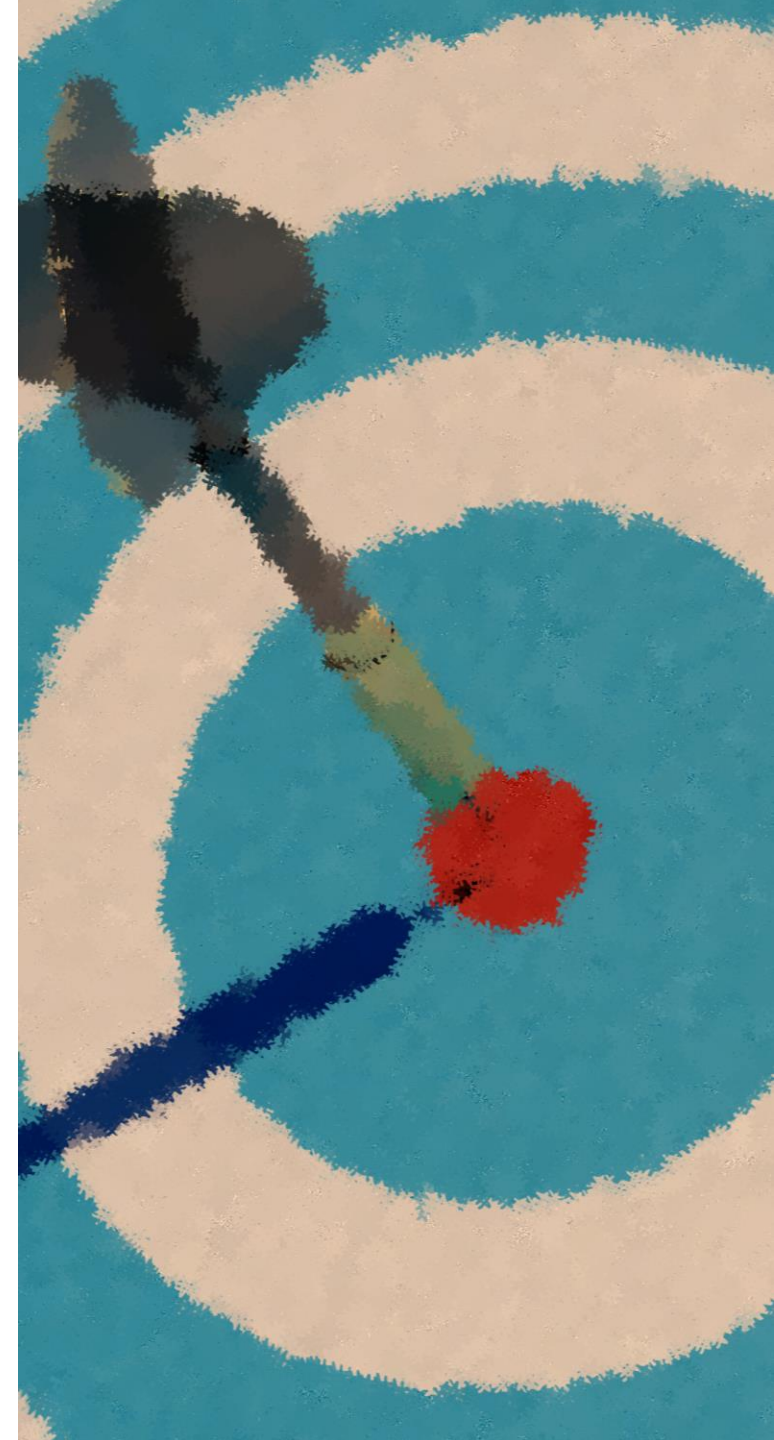
- Prepare the university for the data sharing pilot scheme initiated by UGC, the major academic research funder in Hong Kong, in its open access plan (2022-2026)

Journals' Data Policy and International Trend

- Continue to support our researchers to fulfill the overseas funders' and journals' requirements on research data sharing
- Advocate and facilitate open data within the APAC region and beyond

Training and Advocacy

- Events and webinars celebrating the **International Open Access Week** yearly in late-October
- Author workshops with TA partner publishers
- Webinars and workshops on **Open Data** concepts and **DataHub**



Events for the International Open Access Week & Transformative Agreements Author Workshops


**RESEARCH INTELLIGENCE SERIES:
OPEN ACCESS WEEK SEMINARS**

**SEMINAR I:
TRENDS AND PRACTICES IN OPEN DATA
AND DATA PUBLISHING**


25 OCT 2021 3:00PM-5:00PM ONLINE (VIA ZOOM)

This seminar covers a range of topics in the recent initiatives and support available to researchers in sharing their research data openly, from the perspectives of editors in scholarly journals and publishers.


Distinguished guests:




Jesse Xiao
Data and Scholarly
Communication Librarian,
HKU Libraries



Yolanda Picó
Editor in Chief,
Data in Brief



Veronique van den Berghe
Senior Editor,
Scientific Data



Graham Smith
Research Data
Manager,
Springer Nature

Registration: <https://tinyurl.com/oddp2021>


SPRINGER NATURE scientific **data** Data in Brief

**SEMINAR II:
THE LANDSCAPE AND TRANSFORMATIVE
ROLE OF PREPRINTS**


27 OCT 2021 10:00AM-11:15AM ONLINE (VIA ZOOM)

In this seminar, we will look into the development of the use of preprints, how its role has been transformed within the scholarly publishing field, and the current practices of preprint publication at preprint servers.

Distinguished guests:



Shirley Decker-Lucke
Content Director,
SSRN/Elsevier



Jessica Polka
Executive Director,
ASAPbio

Registration: <https://tinyurl.com/trp2021>

Enquiries: researchdata@hku.hk

**CAMBRIDGE
UNIVERSITY PRESS
READ & PUBLISH
AUTHOR TRAINING**

**13 JAN 2022
4:00 - 5:00PM
ONLINE (VIA ZOOM)**

APC FREE!

QR Code: <https://tinyurl.com/HKUCUPRNP>
scholarlycomm@hku.hk

**Author Workshop
Publishing Open Access in Wiley
and Hindawi journals under Wiley
and JULAC's transformational
agreement, 2023**

Date: 6 February 2023 (Monday)
Time: 2:30-3:30 pm (HK Time)
Venue: Online (GoToWebinar)
Speaker: Mr. Fabio Di Bello

QR Code: <https://bit.ly/HKU-AW>

**Author Workshop:
Publishing Open Access in
a Springer Nature Journal**

**17 Jan 2024 (Wed)
4 - 5 pm
Online via GoToWebinar**

REGISTER NOW <http://tinyurl.com/springernatureoa>

**OPEN ACCESS WEEK 2022
SEMINARS**

**Publishing with Cambridge
University Press:**
Our OA & Hybrid Journals in Humanities
and Social Sciences
**9.NOV.2022 (Wed)
1:00-2:00PM Online via Zoom**

Participants will learn about:

- The publishing landscape for Open Access (OA) journals and books.
- Tips on journal selection, submission and the editorial review process will be covered.
- An overview of the OA / hybrid journals published by Cambridge and its author services.

Guest Speaker
Mr. Joe Ng
Acquisitions Editor
(Social Sciences)
CAMBRIDGE UNIVERSITY PRESS

Registration: <https://tinyurl.com/hkulcup2022>

**Open Science & Open Access Publishing:
Integrity and Innovations
28.OCT.2022 (Fri)
2:00-4:00PM Online via Zoom**

1st session
Open science in practice through PLOS Journals
Ms. Elaine Tham
Regional Director, Publishing Development (Asia), PLOS

2nd session
Understanding best practice in open access publishing and DOAJ services
Dr. Cenyu Shen
Quality Team Leader, DOAJ, DOAJ Ambassador for China

3rd session
**Three things to know before O.A. publishing:
channels, tools, and skills**
Dr. Woei Fuh Wong
Consulting Manager of iResearch, iGroup Asia Pacific

Contact Us: scholarlycomm@hku.hk

Celebrating International Open Access Week
23-29 October, 2023

Seminars:

Towards Equity and Excellence
HKU Libraries' Journey to Support Open Science
24/10 (TUE) 12:30-13:30 Zoom
Speaker: **Ms. Fanny Liu**
Engineering Librarian
The HKU Libraries

"Peer Community In" is the future of science
Empowering authors and community with moving to diamond open access and community initiatives
26/10 (THU) 16:00-17:00
MPZ, Level 3, Main Library / Zoom
Guest Speaker: **Dr. Gilad Feldman**
Assistant Professor
Department of Psychology
HKU

Campaigns:

A concept a day gets you on your way to O.A.
Follow us on [Facebook](#) [Instagram](#) [Twitter](#) to learn an Open Access concept a day

Open Access Master Challenge
Take a quiz to test your knowledge of Open Access.

Webinars on Open Data and DataHub

Research data ACADEMY The University of Hong Kong Libraries PLOS

SHARING RESEARCH DATA

Practical Examples of What to Do and Why It Benefits Your Research

SPEAKERS

Dr. Lauren Cadwallader
Open Research Manager, PLOS

Dr. Julia Squarr
Journal Development Manager, PLOS

02 MAY

4:30-5:30 PM (Hong Kong Time)

zoom ALL ARE WELCOME



Sharing research data – practical examples of what to do and why it benefits your research



Dr Lauren Cadwallader & Dr Julia Squarr

The University of Hong Kong Libraries EBSCO protocols.io GIGA SCIENCE PRESS CODE OCEAN

RESEARCH INTELLIGENCE@HKUL: OPEN RESEARCH, OPEN DATA, AND OPEN PUBLISHING

DATE: 12 MAY 2021 (WED)
TIME: 10:00AM - 11:50AM
VENUE: ONLINE WEBINAR

Check details and register at:
<https://more.ebsco.com/tw-wbn-research-intelligence-main.html>

Contact us: researchdata@hku.hk



The University of Hong Kong Libraries figshare

RESEARCH INTELLIGENCE@HKUL: RESEARCH DATA SEMINAR

SECURELY STORE YOUR PROJECT DATA & SUPPLEMENTARY MATERIAL ON DATAHUB

14 MAY 2021
2:00PM - 3:00PM
ONLINE VIA ZOOM

Guest Speaker:
Ms. Megan Hardeman, Head of Engagement, Figshare

Check details and register at:
https://lib.hku.hk/cgi-bin/course/list_gp_m.cgi?category=8

Contact us: researchdata@hku.hk



OPEN ACCESS WEEK SEMINAR

RESEARCH INTELLIGENCE: TRENDS AND PRACTICES IN OPEN DATA AND DATA PUBLISHING

Date: 25 October 2021 (Mon)
Time: 3:00pm - 5:00pm
Venue: Online (via Zoom)

CO-ORGANIZED BY:
The University of Hong Kong Libraries ELSEVIER

DISTINGUISHED GUESTS:
SPRINGER NATURE scientific data Data in Brief

Check details and register at:
<https://tinyurl.com/odd2021>

Contact us: researchdata@hku.hk



The University of Hong Kong Libraries

MANAGE YOUR RESEARCH DATA & OTHER SCHOLARLY OUTPUTS IN DATAHUB



8 NOV 2023 (WED)
12:30 - 13:30

zoom REGISTER



Part IV



Overview of HKU and HKUL



Open Science at a Glance



HKU Libraries Open Science Initiatives

Open access publishing

Open data

Training and advocacy



Key takeaways

Key takeaways - Commitment & collaboration

- HKU Libraries advances the teaching and learning, research, and knowledge exchange pursuits of the University
- Participates in enabling and advocating open science, including:
 - Open access publishing (infrastructure, financial support for HKU authors)
 - Open data (infrastructure, training sessions)
 - Advocacy (promotional campaigns, training sessions)
- Works towards commitment and collaboration for an equitable and trustworthy scholarly communication system



Thank You !

Tina Yang

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