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#### Open access and open science in Singapore

Lian-Ping 00I National Institute of Education, Singapore

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# **Community Update**

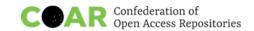
# Open Access and Open Science in Singapore

#### **Ooi Lian Ping**

National Institute of Education, Nanyang Technological University (NIE NTU), Singapore

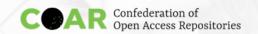
(With inputs from A\*STAR, NUS, NTU, SIT, SMU, SUTD)





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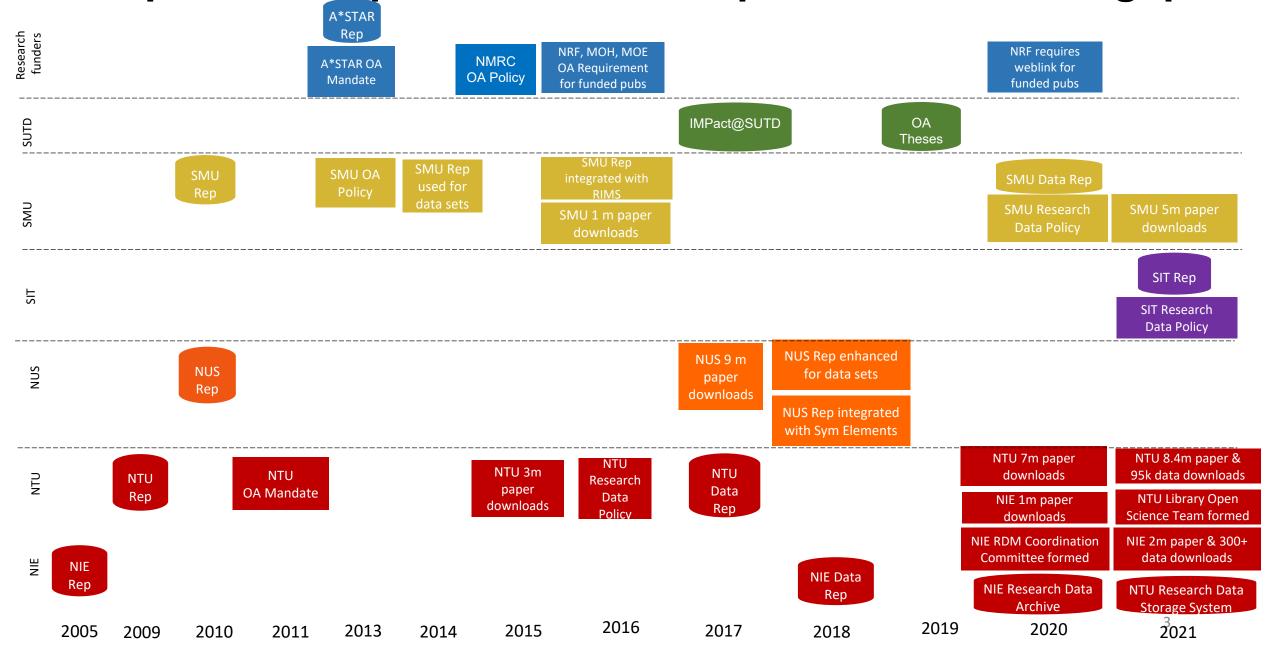




#### **Outline**

- Overview of Open Access and Open Science Development
- Introduction to Funding Bodies and Research Institutions
- Open Access and Open Science Initiatives in Singapore Institutions

# Development of Open Access and Open Science in Singapore



# **Institutions**

Major Funding Bodies	Universities
National Research Foundation (NRF)	<ul> <li>Nanyang Technological University (NTU)</li> <li>National Institute of Education (NIE NTU)</li> </ul>
<ul> <li>Agency for Science, Technology and Research (A*STAR)</li> </ul>	National University of Singapore (NUS)
National Medical Research Council (NMRC)	Singapore Institute of Technology (SIT)
Ministry of Education (MOE)	Singapore Management University (SMU)
	Singapore University of Social Sciences (SUSS)
	Singapore University of Technology and Design (SUTD)
	Yale-NUS College

# Mandates & Policies (1)

Funding Bodies	Mandates / Policies
National Research Foundation (NRF)	Requires research-performing institutions to have OA policies (Jul 2014) Requires submission of weblink to open access publication (Mar 2020) - Publications arising from its funded research to be made open access, no later than twelve months after the official date of publication.  Allows the use of research grants for Article Processing Charges (APC)
Agency for Science, Technology & Research (A*STAR)	Open Access Mandate (Aug 2013)  • Peer-reviewed articles/conference proceedings made publicly available no later than 12 months after publication  Data Management Plan Pilot (in progress)  Research Data Policy (in progress)  Allows the use of research grants for Article Processing Charges (APC)*  *Refer to T&C of specific funding
National Medical Research Council (NMRC)	Open Access of Publications (May 2015)  • Open access of peer-reviewed publications regardless of the funding quantum Sharing of research data (Nov 2015)  • Mandatory for projects with <b>at least S\$250,000</b> of direct research cost Allows the use of research grants for Article Processing Charges (APC)

# Mandates & Policies (2)

Institutions	Mandates / Policies
Nanyang Technological University (NTU)	Open Access Policy (Aug 2011, revised in 2021)  Data Management Plan (Apr 2016, revised in 2020)  Research Data Policy (Apr 2016, revised in 2020)
National Institute of Education (NIE NTU)	NIE Data Management Plan (May 2016, revised in 2020) NIE Research Data Management Policy & Guidelines (Jul 2017, revised in 2021)
National University of Singapore (NUS)	Self-archiving Mandate (in progress) Research Data Management Policy & Guidelines (Jul 2019, revised in 2020)
Singapore Institute of Technology (SIT)	Research Data Management Policy (Dec 2020)  Open Access Policy (in progress)
Singapore Management University (SMU)	Open Access Policy (Oct 2013) Research Data Policy (Jan 2020)
Singapore University of Design and Technology (SUTD)	Research Policy and Guidelines (2016) Data Treatment Policy (2017) Research Data Policy (in progress)

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# Repositories

Institution	Repositories	URL	Year launched
A*STAR	A*OAR	http://oar.a-star.edu.sg	2013
NTU	DR-NTU (Publications) [DSpace-CRIS] DR-NTU (Data) [Dataverse] Research Data Storage System In-progress data, and finalised but sensitive data	https://dr.ntu.edu.sg https://researchdata.ntu.edu.sg Intranet access	2009 2017 2021
NIE NTU	NIE Digital Repository [DSpace-CRIS] NIE Data Repository [Dataverse] NIE Research Data Archive (Restricted)  Data of completed projects and sensitive data	https://repository.nie.edu.sg https://researchdata.nie.edu.sg Intranet access	2005 2018 2020
NUS	<ul> <li>Scholarbank [DSpace-CRIS]</li> <li>Publications and Data repository</li> <li>Digital GEMS</li> <li>Digitised materials collection</li> </ul>	https://scholarbank.nus.edu.sg https://digitalgems.nus.edu.sg	2010 2018
SIT	<ul> <li>Institutional Research Repository (IRR) [Figshare]</li> <li>Publications and data repository</li> </ul>	https://irr.singaporetech.edu.sg	2021
SMU	InK [Digital Commons] Research Data Repository RDR [Figshare]	https://ink.library.smu.edu.sg https://researchdata.smu.edu.sg	2010 2020
SUTD	Institutional Repository (in process)	-	

new

## **Open Access Publishing in Singapore**

Increase in open access publications produced by research institutions.

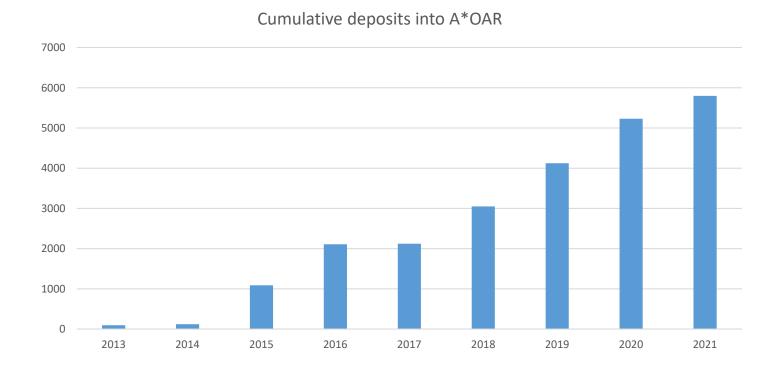
Publication Years Till	% of OA Publications in Scopus	% of OA Publications in Web of Science
2020	23	24
2015	17	18
2010	12	13

Statistics correct as at 18 Oct 2021. (Based on OA publications produced by A\*STAR, NTU, NUS, SIT, SMU, SUSS, SUTD, Yale-NUS)

Data included herein are derived from Elsevier *Scopus* © Copyright Elsevier 2021, and Clarivate *Web of Science* © Copyright Clarivate 2021. All rights reserved.

# A\*STAR Open Access Repository (A\*OAR)

Downloads (Cumulative, may include bots)	Views (Cumulative)	Searches (Cumulative)
>1,097,344	>970,514	>9,955,933



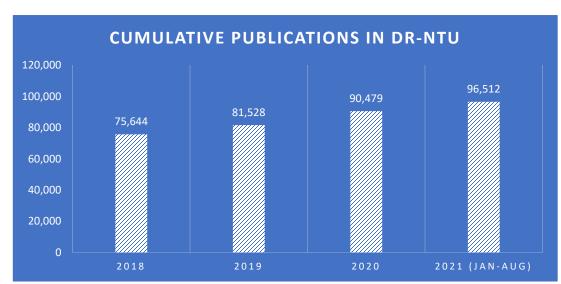
Total Number of Items	Number of Items with Full Text
5,798	4,577

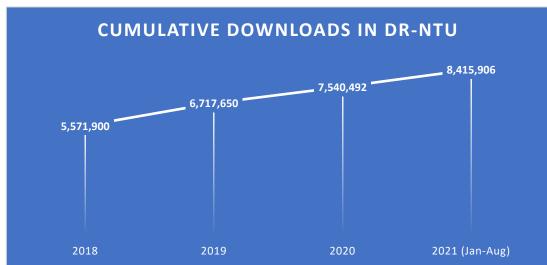
**Set up in 2013** 

Over 78% come with full text

More than 1m downloads

#### **NTU Digital Repository**

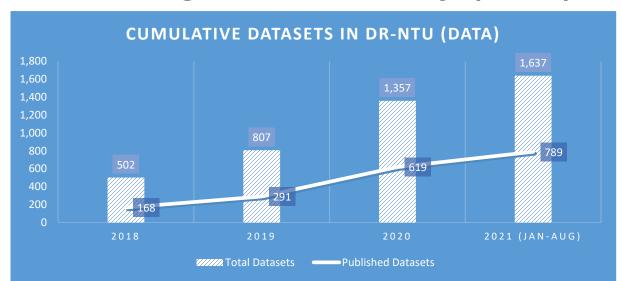


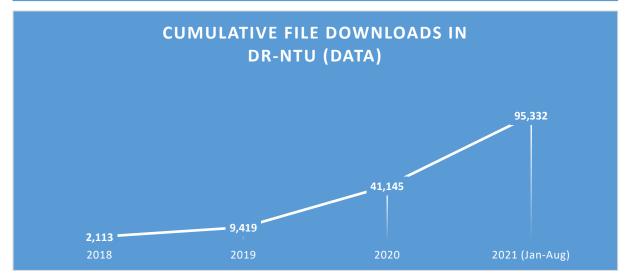


Built on an open-source application: DSpace-CRIS

> 2021: Activation of Academic Profile

#### **NTU Digital Repository (Data)**



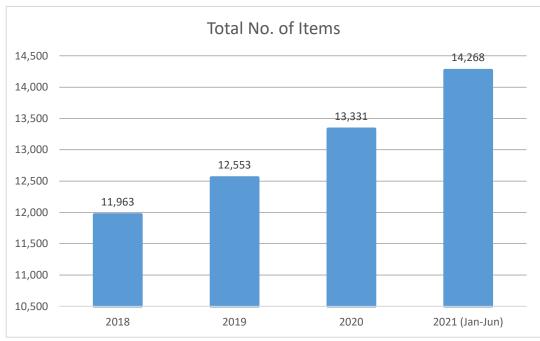


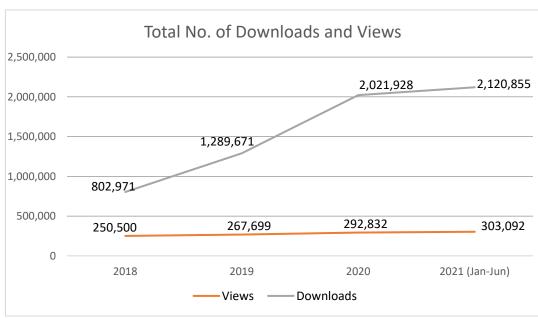
Built on an open-source application: Dataverse



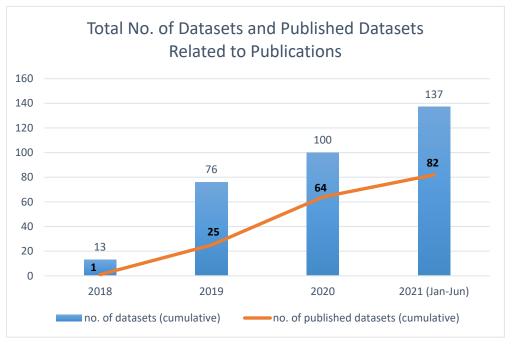
2021: Development of Research Data Management elearning

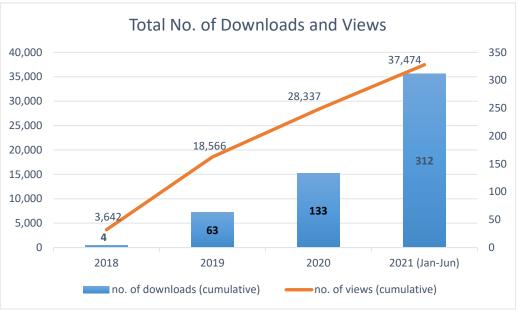
#### **NIE Digital Repository**





## **NIE Data Repository**





#### **New Digitised Collections (NIE)**

#### **MAS Manuscripts**



- Unpublished manuscripts by the late Dr. Muhammad Ariff Ahmad (MAS), Singapore's "father of Malay language, literature and culture"
- Indexed with bilingual entries (Malay/English) for the title and abstract fields

#### **NIE Art Archive**



- Digitised students' art works, with synopsis and creator's profile
- Browsable via Alma Digital, an integral archival platform of the Ex Libris library management system

## **Open Access Resources (NTU & NIE)**

- HSSE Online (peer-reviewed)
- Knowledge Resource Bank (insights/tools derived from research)
- Learning@NIE
- Local Evidence Syntheses

- <u>LIBRES</u> (peer-reviewed)
- NIE Working Paper Series
- OER Knowledge Bites
- SingTeach

# **Open Science Initiatives (NTU & NIE)**

 Library's role: creating awareness and advocating best practices in areas such as reproducible science, research data management, open data sharing and open scholarship

Building Library Capabilities for Research Data Management Services and Challenges in Managing the Institutional Research Data Repository Open Science and Educational Research Data Management







Season 2: 6-Weekly sessions with researchers discussing open science movement.

https://blogs.ntu.edu.sg/ntulibrary/2021/03/26/reproducibilitea\_season2/ReproducibiliTea Journal Club (Singapore):

https://reproducibilitea.org/journal-clubs/#Singapore

**Open Data Sharing** 



Open Scholarship



https://blogs.ntu.edu.sg/ntulibrary/2020/11/06/open-access-week-2020-day2 recap/

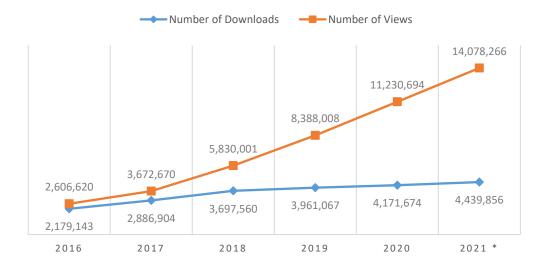
https://blogs.ntu.edu.sg/ntulibrary/2020/11/13/open-scholarship-webinar-a-recap/3

# **NUS Repositories**

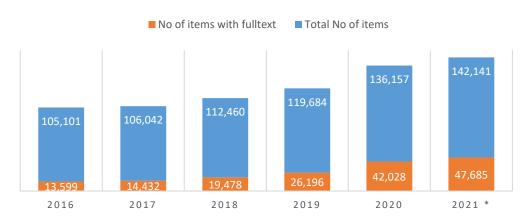
## ScholarBank@NUS

(Research outputs)

VIEWS AND DOWNLOADS



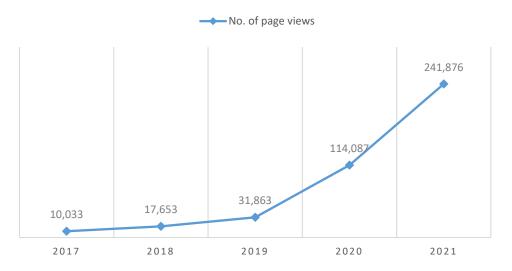
#### NO. OF ITEMS AND FULLTEXT



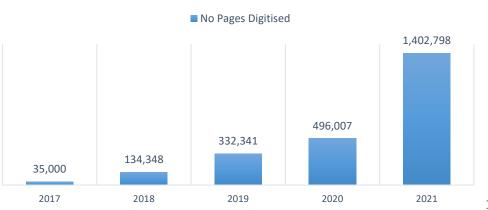
#### **Digital Gems**

(Rare, historical & primary source materials)

**PAGE VIEWS** 



#### NO OF PAGES DIGITISED



## **NUS Digitised Collections**

- Outsourced digitisation to facilitate access to rare materials on SE Asia during the Covid-19 outbreak
  - Added over 900K digitised pages from 105 historical Southeast Asian newspaper titles published in English, Jawi and Chinese language
- 5 new collections were added to Digital GEMS
  - Koh Kim Yam Private Papers, Earl of Cranbrook Private Papers, Law and Malay and English newspapers



## **NUS Open Access Initiatives**

- NUS Libraries has negotiated several deals with publishers/societies to offer a discount to NUS authors who are paying Article Processing Charges (APC) to make their articles openly available.
- Some offer a discount off the APC and others offer a limited number of tokens to offset either the full or partial cost of APC.













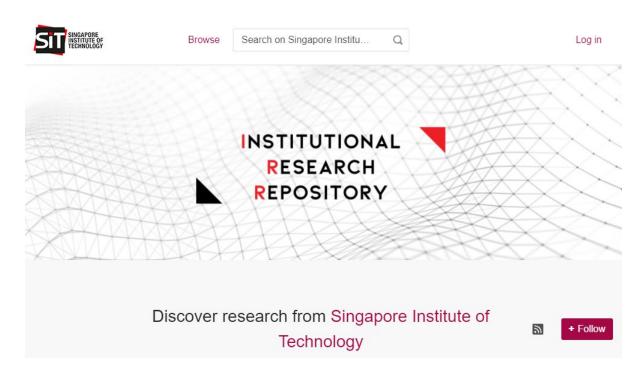


# SIT Institutional Research Repository (IRR)

Launched in October 2021

 Uses Figshare for Institutions as an all-in-one repository for different formats of research outputs

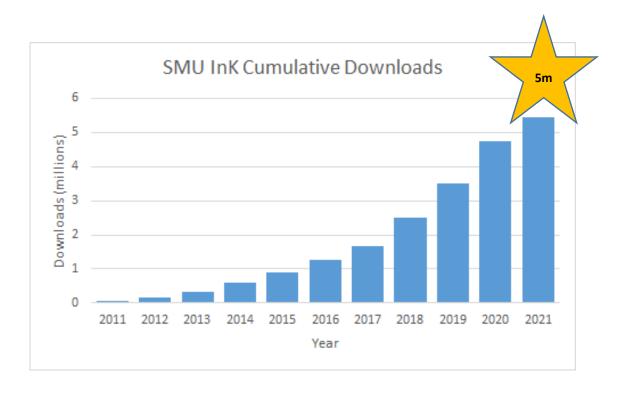
 Partnered with vendor to enhance the platform with Sherpa-Romeo and ORCID integration



https://irr.singaporetech.edu.sg/

# **SMU Repositories**

 Strong growth in downloads and usage of InK, SMU paper repository, and SMU Research Data Repository (RDR)



SMU RDR by type	Cumulative Downloads
Dataset	7,443
Software	1,289
Total	8,732

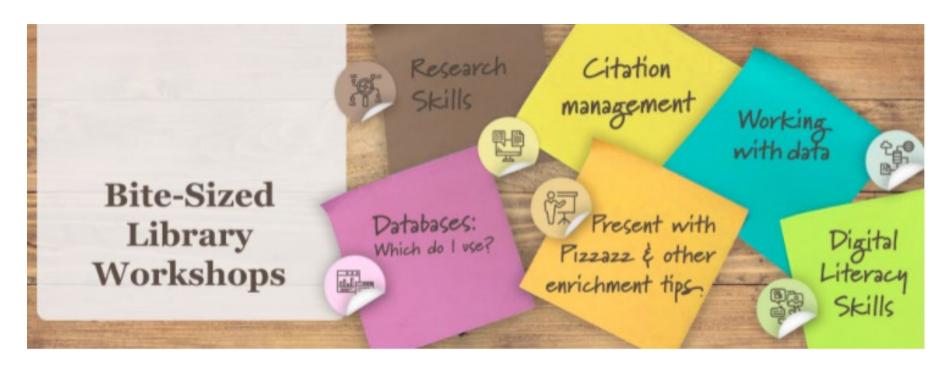
Launched in Apr 2020

Citations to dataset in RDR = 2

Plan engagement with faculty to encourage deposit of datasets

## Workshops & Open Access Serial Publications

One-hour bite-sized workshops
 Research Data Management, Cleaning Data with OpenRefine,
 Making Your Research Reproducible, Doing Data Science with R



- Open access serials publications available in InK
  - o Asian Management Insights
  - Perspectives@SMU

# Collaboration: Singapore Alliance of University Libraries - Research Support Task Force (SAUL-RSTF)

- Members: University Libraries in Singapore
- Collaborate to enhance research support in parent institutions and facilitate research productivity of researchers in Singapore
- Quarterly meeting cum sharing session (since Dec 2019):
  - o open science/open scholarship
  - o scholarly publishing
  - o research data management
  - o research metrics/impact, etc.

