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South African HE Libraries as Catalysts for SDG Impact: Strategies for Access, Collaboration, and Societal Engagement

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UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

South African HE Libraries as Catalysts for SDG Impact: Strategies for Access, Collaboration, and Societal Engagement

2nd Biennial TUT LIS Transformative Summit, 28-29 August 2025

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Higher Education Institutions (HEIs), libraries, Sustainable Development Goals (SDGs), and Artificial Intelligence (AI) is a nexus where innovation meets purpose

HEIs & AI for Sustainable Development

HEIs are uniquely positioned to lead the charge in using AI to accelerate progress toward the SDGs. According to the UN HESI Action Group:

- **AI is reshaping education**: Generative AI tools like ChatGPT are prompting HEIs to rethink teaching, research, and administration.
- **SDG urgency**: Only 15% of SDG targets are on track for 2030, with nearly half showing no progress or regression.
- **HEIs as changemakers**: They can harness AI to tackle global challenges – SDGs 1-17

Libraries as AI-Enhanced Knowledge Hubs

As academic libraries we need to evolve and provide repositories as dynamic engines of innovation:

- **AI-powered services: Smart cataloguing, personalised research recommendations, and predictive analytics for Research Visibility and Impact.**

- Open access & data stewardship: Libraries need to champion open science and FAIR data principles, aligning with SDG 4 (Quality Education) and SDG 9 (Industry, Innovation, Infrastructure).

- Digital equity: By providing inclusive access to AI tools and digital resources, libraries will help bridge the technological divide.

SA's Academic Libraries & SDGs Impact

- Promote open access to research and data
- Facilitate community development through dissemination of publicly funded research outs puts – publications and datasets
- Encouraging sustainable practices in education and research

Therefore all South African academic libraries should actively align their services and outreach with the UN's Sustainable Development Goals (SDGs), particularly through community engagement, access to information, and digital inclusion

Promoting Open Access: Democratizing Knowledge

- Institutional Repositories: that archive theses, articles, and datasets (WiredSpace & Wits Open Data Vault)
- Open Journal Systems: that support platforms that publish institutional peer-reviewed research without paywalls – Wits Journals (Open Journal System)
- Data Stewardship: to train researchers/postgraduate students in FAIR data principles (Findable, Accessible, Interoperable, Reusable), i.e. Wits Doctoral Academy and GOLD (The Wits Graduate Online Learning and Development (GOLD) Programme)

Challenges & Opportunities

Challenges:

- Funding constraints
- Digital divide
- Policy alignment – institutional/national/global

Opportunities:

- National SDG strategies, i.e. SDGs Tracking Platform
- AI and data analytics
- Strengthening community partnerships and collaborations (institutional collo

Improved Discoverability of Institutional Research Outputs (SDG resources)

- Tagging and indexing research outputs with SDG-related keywords (e.g. “climate resilience,” “gender equity,” “clean energy”) helps research community to find relevant content faster.
- Linking metadata to SDG indicators allows researchers and policymakers to track contributions to specific goals.
- Enhanced cataloguing of grey literature, datasets, and community projects ensures that non-traditional knowledge is also accessible (e.g. including Archives and Special Collections



Supporting Data Management & Reuse

- Metadata for datasets ensures that SDG-related data is findable, accessible, interoperable, and reusable (FAIR principles).

- Persistent identifiers (like DOIs and ORCID iDs) help track the impact of SDG research across disciplines and borders.

Enabling Innovation & Decision-Making

- Analytics from metadata can reveal trends, gaps, and emerging areas in SDG research.

Facilitating Interdisciplinary Collaboration

- Metadata harmonization across disciplines (e.g. education, economics, public health) enables integrated SDG solutions.
- Linked data and semantic web technologies allow libraries to connect diverse resources into meaningful knowledge graphs.
- Metadata-driven discovery tools can recommend SDG-aligned collaborators, projects, or funding opportunities.
- Metadata dashboards can help institutions monitor their contributions to sustainability goals.

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The Way Forward

- Embed SDG goals into library strategic plans
- Advocate and review open access policies at institutional level and benchmark global
- Train faculty librarians as **SDG ambassadors**
- Measure impact through **SDG-aligned metrics**
- Make institutional repositories trusted platforms for publishing SDG-related research openly
- Support for open data initiatives that align with transparency and global collaboration
- Guidance on publishing in open-access journals/datasets to increase visibility of institutional research
- Training in data visualization and GIS tools to map and analyse SDG progress

SA HE libraries adding value to the academic projects - Implementation open publishing platforms

OpenUCT

Communities & Collections | Browse OpenUCT | Statistics | Log In

All of OpenUCT | Search the repository ... | Search

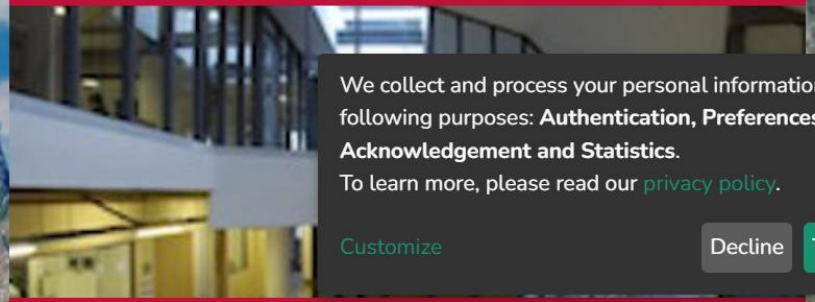
OpenUCT is the open access institutional repository of the University of Cape Town (UCT). It preserves and makes UCT scholarly outputs digitally and freely available, including theses and dissertations, journal articles, book chapters, technical and research reports, as well as open educational resources.

Research Output



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Theses & Dissertations



View collections

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UJ Press Journals

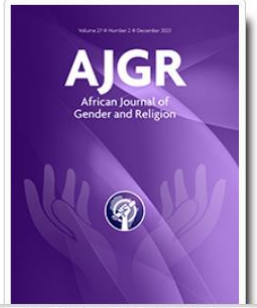
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African Journal of Gender and Religion

The *AJGR* is an online, peer-reviewed, open-access journal for the transdisciplinary study of gender and religion in Africa. The *AJGR* is housed in The Desmond Tutu Centre for Religion and Social Justice at the University of the Western Cape. The journal seeks ...

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African Journal of Political Science

The *African Journal of Political Science* is the flagship publication of the African Association of Political Science. It is an open-access and strictly peer-reviewed academic journal dedicated to the study of the political in all its dimensions and permutatio ...

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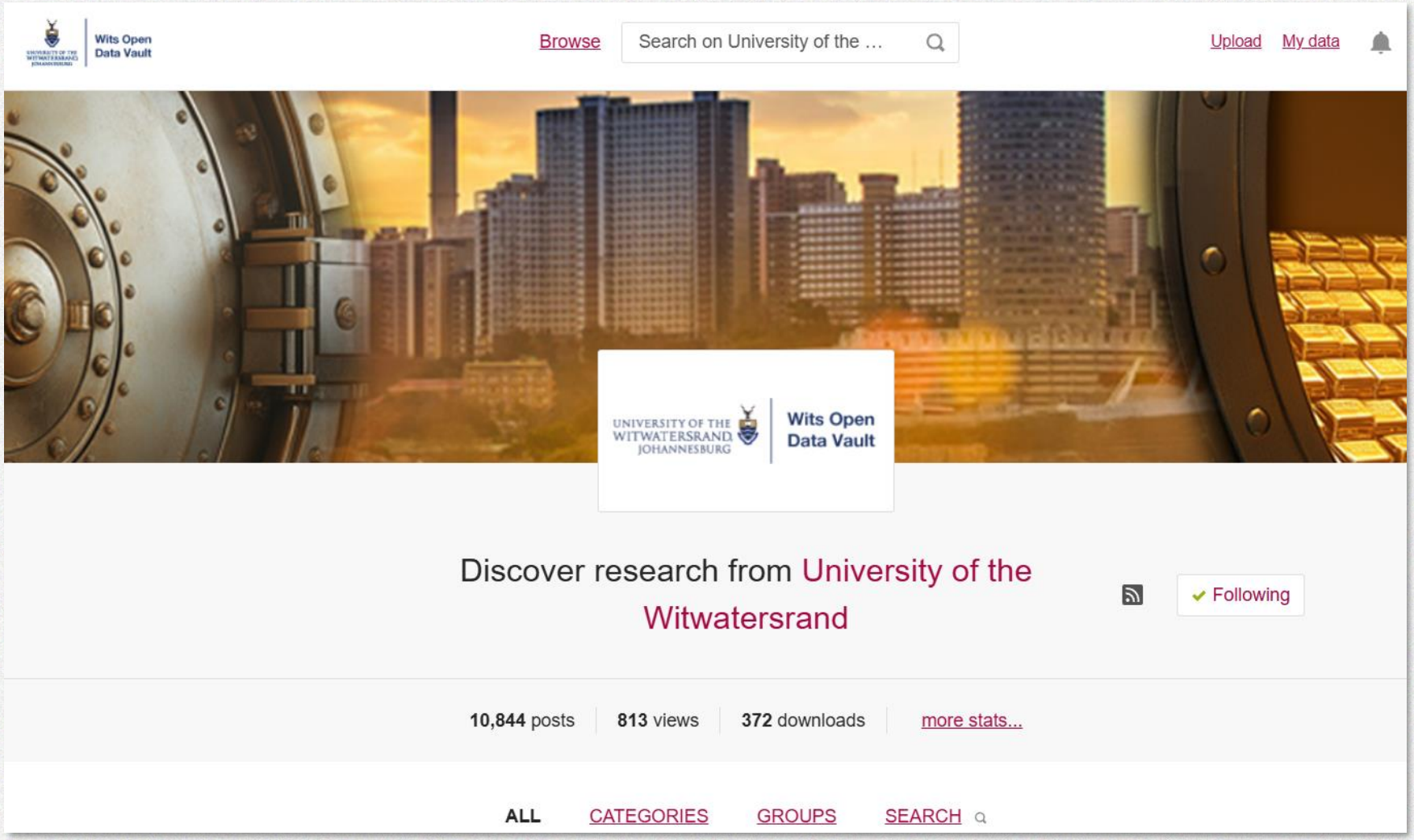
21 Journals titles managed by UJ Libraries & UJ Press

100 1922 2022

Expanding the research of Wits Research Publications



Wits Open Data Vault: FigShare



Metadata Enrichment: Repository Content – CPUT vs TUT

Wits Retrospective *Research* Outputs

PUBLICATIONS	**DATASETS**	GRANTS	PATENTS	CLINICAL TRIALS	P
75,319	**57,120**	20,749	734	362	0

University of the Witwatersrand

Johannesburg, South Africa

View Details

Publications	Datasets	Grants	Patents	Clinical Trials
75,319	57,120	20,749	734	362

Funding amount
USD 1.16 B

Publications & Datasets – Research Categories

Cape Peninsula University of Technology

Cape Town, South Africa

View Details

Publications	Datasets	Grants	Patents	Clinical Trials
5,314	1,212	2,827	35	2

Funding amount
USD 6.18 M

Tshwane University of Technology

Pretoria, South Africa

View Details

Publications	Datasets	Grants	Patents	Clinical Trials
9,760	196	2,005	131	1

Funding amount
USD 18.73 M

Dimensions
A **Digital Science** Solution

Source: 2025/08/28

Open Access Publications

Dimensions
A **Digital Science** Solution

Source: 2025/08/28

CPUT

Name	Publicat...	Citations	Citations mean
Closed	2,687	40,607	15.11
All OA	2,627	40,381	15.37
Gold	1,936	24,127	12.46
Hybrid	338	11,049	32.69
Green	200	2,378	11.89
Bronze	153	2,827	18.48

Total of Publications = 5314

TUT

Publicat...	Citations	Citations mean
5,612	110,171	19.63
4,148	61,136	14.74
3,136	42,214	13.46
581	10,624	18.29
226	3,899	17.25
205	4,399	21.46

Total of Publications = 9760

Metadata Enrichment

Kidney transplantation in Africa – workforce, capabilities, and perceived barriers

Cite | Download (184.5 kB) | Share | Embed | + Collect | •••

Dataset posted on 2025-06-09, 12:49 authored by Malcolm Davies, Malcolm Davies

This database of African Association of Nephrology (AFRAN) members was collected under conditions of anonymous voluntary participation using AFRAN SoME (social media) platforms. The database describes training and clinical practice in kidney transplantation, local transplantation programme capability, and perceived barriers to kidney transplantation on the African continent

HISTORY

- **2025-06-09** - First online date, Posted date

GROUP AFFILIATED WITH

- Faculty of Health Science

LANGUAGE

Eng

SUSTAINABLE DEVELOPMENT GOAL (SDG)

- SDG-3: Good health and well-being

AUTHOR URL

0000-0003-0367-3051

USAGE METRICS

8 views	1 downloads	0 citations

Wits Open Data Vault

CATEGORIES

- Health sciences
- Health services and systems

KEYWORDS

Kidney transplantation | Transplantation nephrologist | Transplantation programme activity | Barriers to transplantation | Nephrologist training | Africa

LICENCE

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Wits vs. other SA HEIs – 2025: SDGs

1	=23	University of Johannesburg South Africa	1 93.8 8 90.1 10 84.6 17 99.3 SDG Descriptions	94.9
2	63	University of Pretoria South Africa	9 80.7 – 92.3 1 81.4 8 79.1 17 98.8 SDG Descriptions	91.4
3	101–200	University of Cape Town South Africa Explore	9 93.9 14 79.9 11 78.5 17 86.7 – 91.8 SDG Descriptions	83.7–89.4
4	201–300	University of the Witwatersrand South Africa	8 78.1 3 77.4 5 63.2 – 67.8 17 86.7 – 91.8 SDG Descriptions	79.4–83.6

GenAI for Open Repositories & RVI

Managing Access to Open Repositories in the Age of Generative AI

Martin Klein
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With slides and input from
Kathleen Shearer and Paul Walk

New LIS Perspective – on other Conferences







African Institute for Data Science and Artificial Intelligence (AfriDSAI)

Afrika-instituut vir Datawetenskap en Kunsmatige Intelligensie / Institute ya Afrika ya Disaense tša Data le Bohlale bja Maitirelo

MIND

Machine Intelligence and Neural Discovery Institute

wits.ai

Artificial Intelligence Institute of South Africa

communications & digital technologies

Department: Communications & Digital Technologies

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How to Make Artificial Intelligence Work for Africa. HIT Public Lecture by Prof. Arthur G. Mutambara

https://www.youtube.com/watch?v=ATSc6EtptT0

Thank You

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