



Academic Libraries' Role in Improving Institutions Research Impact

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Agenda

- **World Class Universities**
 - **Rankings and Research Impact**
 - **Where does KAUST stands now**

- **Role of Libraries**
 - **Institutional repository role in scholarly communication**
 - **Institutional repository within the CRIS context**
 - **Tracking research output: Article , conference paper, patent...**
 - **Measuring impact**
 - **Trainings and awareness**

- **Future**



Through Inspiration, Discovery
King Abdullah University of Science and Technology

Our intention is to create an enduring model for advanced education and scientific research.



The Custodian of the Two Holy Mosques
King Abdullah Bin Abdulaziz Al Saud





World Class University

Teaching

Knowledge Transfer

Global outlook

Research

WEIGHTING SCHEME FOR RANKINGS SCORES

International mix – staff and students	
Ratio of international to domestic staff	2.5%
Ratio of international to domestic students	2.5%
Proportion of internationally co-authored research papers	2.5%

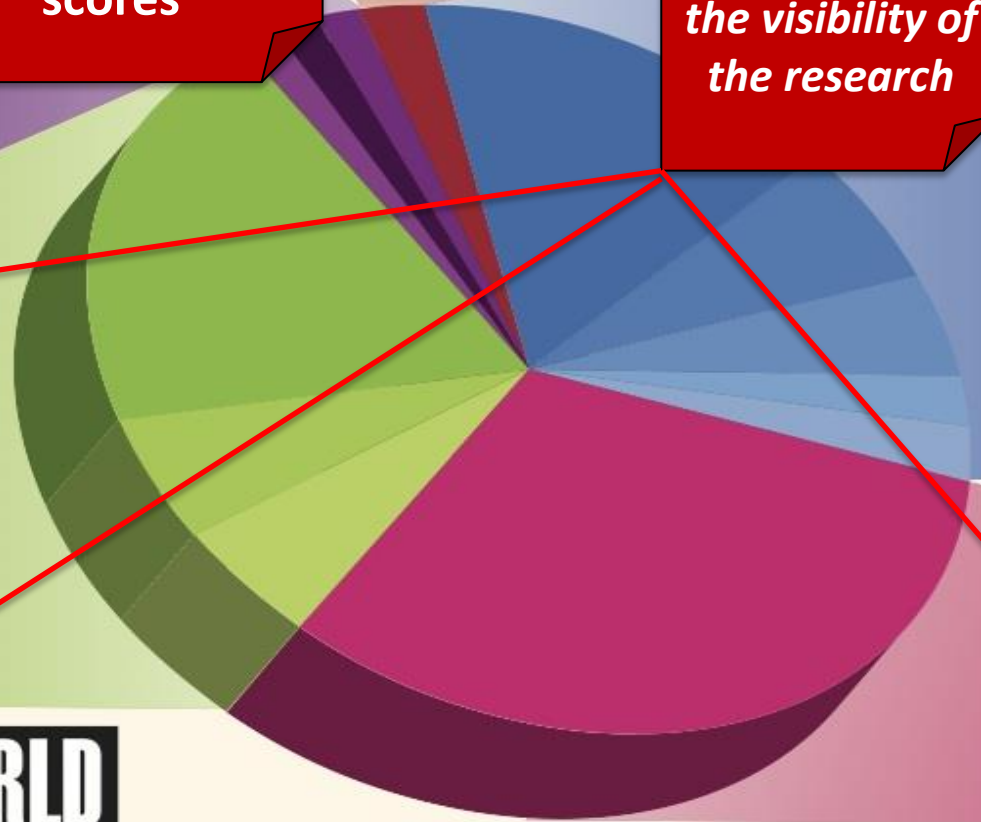
Research publications impact on 38.5% of the total scores

Industry income – innovation	
Research income from industry (per academic staff)	2.5%

Libraries can help in *Improving the impact* By increasing *the visibility of the research*

Teaching – the learning environment	
Reputational survey – teaching	15%
PhD awards per academic	6%
Undergraduates admitted per academic	4.5%
Income per academic	2.25%
PhD awards/bachelor's awards	2.25%

Research – volume, income and reputation	
Reputational survey – research	18%
Research income (scaled)	6%
Papers per academic and research staff	6%



Citations – research influence	
Citation impact (normalised average citations per paper)	30%



For the latest World University Rankings news, debate and social networking, see www.timeshighereducation.co.uk/world-university-rankings/



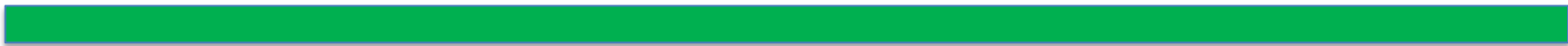
**ACADEMIC
RANKING OF
WORLD
UNIVERSITIES**


40% Scores are related to Scholarly Publications

Indicators and Weights for ARWU

Criteria		Code	Weight
Quality of Education	Alumni of an institution winning Nobel Prizes and Fields Medals	Alumni	10%
Quality of Faculty	Staff of an institution winning Nobel Prizes and Fields Medals	Award	20%
	Highly cited researchers in 21 broad subject categories	HiCi	20%
Research Output	Papers published in Nature and Science*	N&S	20%
	Papers indexed in Science Citation Index-expanded and Social Science Citation Index	PUB	20%
Per Capita Performance	Per capita academic performance of an institution	PCP	10%
Total			100%











* For institutions specialized in humanities and social sciences such as London School of Economics, N&S is not considered, and the weight of N&S is relocated to other indicators.



QS World University Rankings®  and QS Stars

Filter by region ▼ Filter by location ▼ [reset](#)

Filter by faculty ▼ Note: Filtering by subject area will also resort the list by subject-area scores. [reset](#)

RANK	UNIVERSITY	LOCATION	QS STARS ?
Citations per Faculty ▼ Search for universities... <input type="text"/>			<input type="checkbox"/> Show only
1	100.0  King Abdullah University of Science & Technology		
2	100.0  Gwangju Institute of Science and Technology (GIST)		
3	100.0  California Institute of Technology (Caltech)		
4	100.0  Princeton University		



KAUST started in September 2009.

Ranked World First in research impact (Citation per faculty) (QS University ranking) in 2015/16

Size-independent ranking



CWTS Leiden

In this ranking the performance of a university does not depend on the size of its publication output

Size-independent ranking

In this ranking the performance of a university does not depend on the size of its publication output

Size-dependent ranking

In this ranking universities with a larger publication output generally perform better than universities with a smaller publication output

Select field and region/country

Field:

Region:

Country:

Select indicators

Type of indicators:

Based on publications in Thomson Reuters' Web of Science database in the period 2010–2013. Only so-called core publications are included

Advanced parameters

Rank	University	Country	Publications (top 1%)	Stability interval	
38	ETH Zurich		1.9%		
39	Univ Coll London		1.9%		
40	Univ St Andrews		1.8%		
41	Imperial Coll London		10355	1.8%	
42	King Abdullah Univ Sci & Technol		1141	1.8%	
43	Univ Bristol		5615	1.8%	

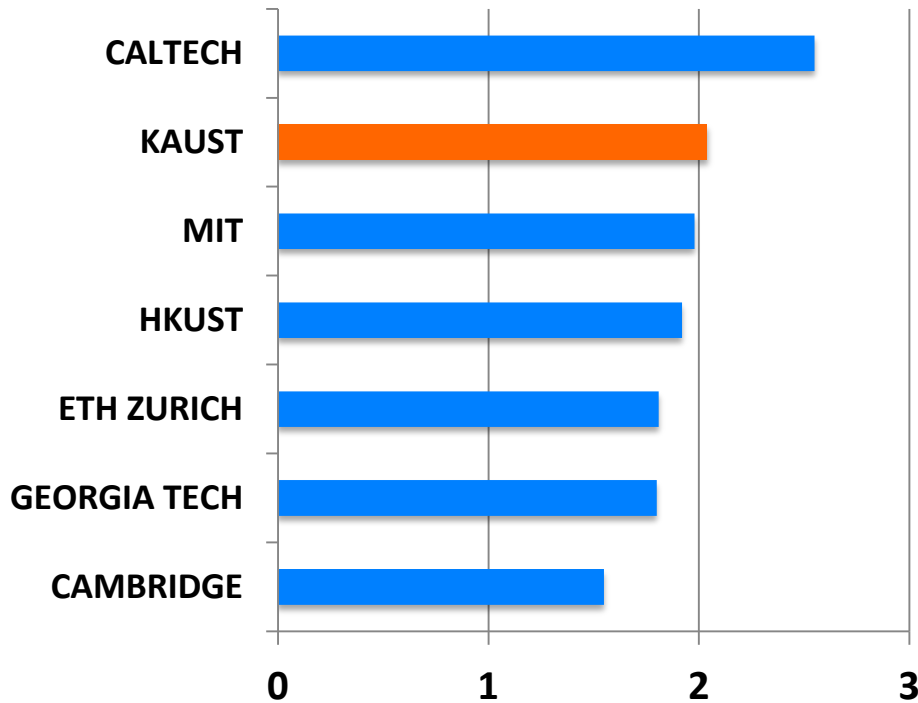
KAUST ranks 42nd in the world, 2nd in Asia



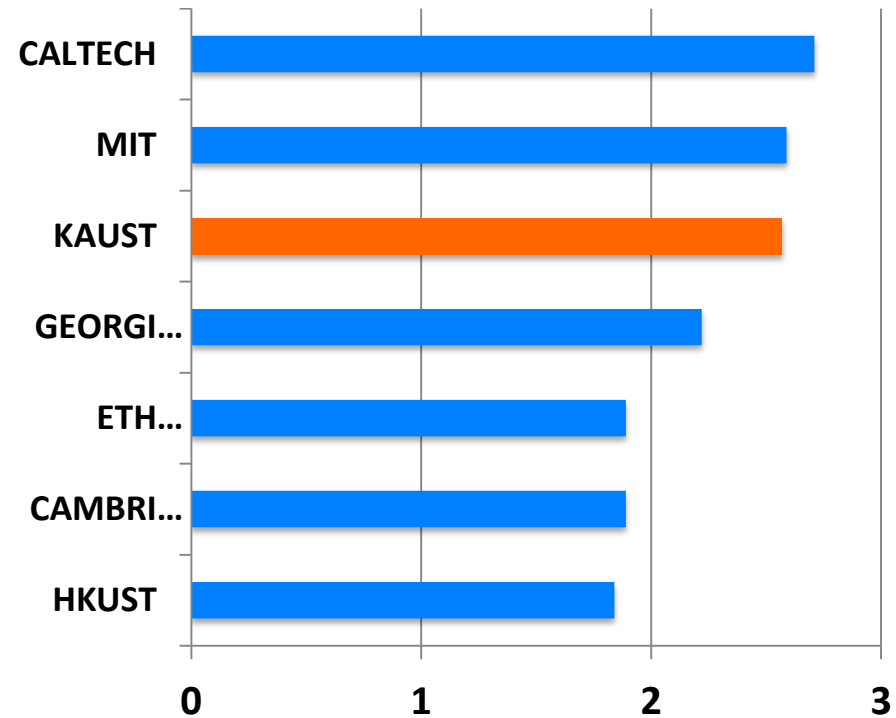
Field-Weighted Citation Impact

(Scopus data from 2011 to 2014, excluding self-citations)

Energy



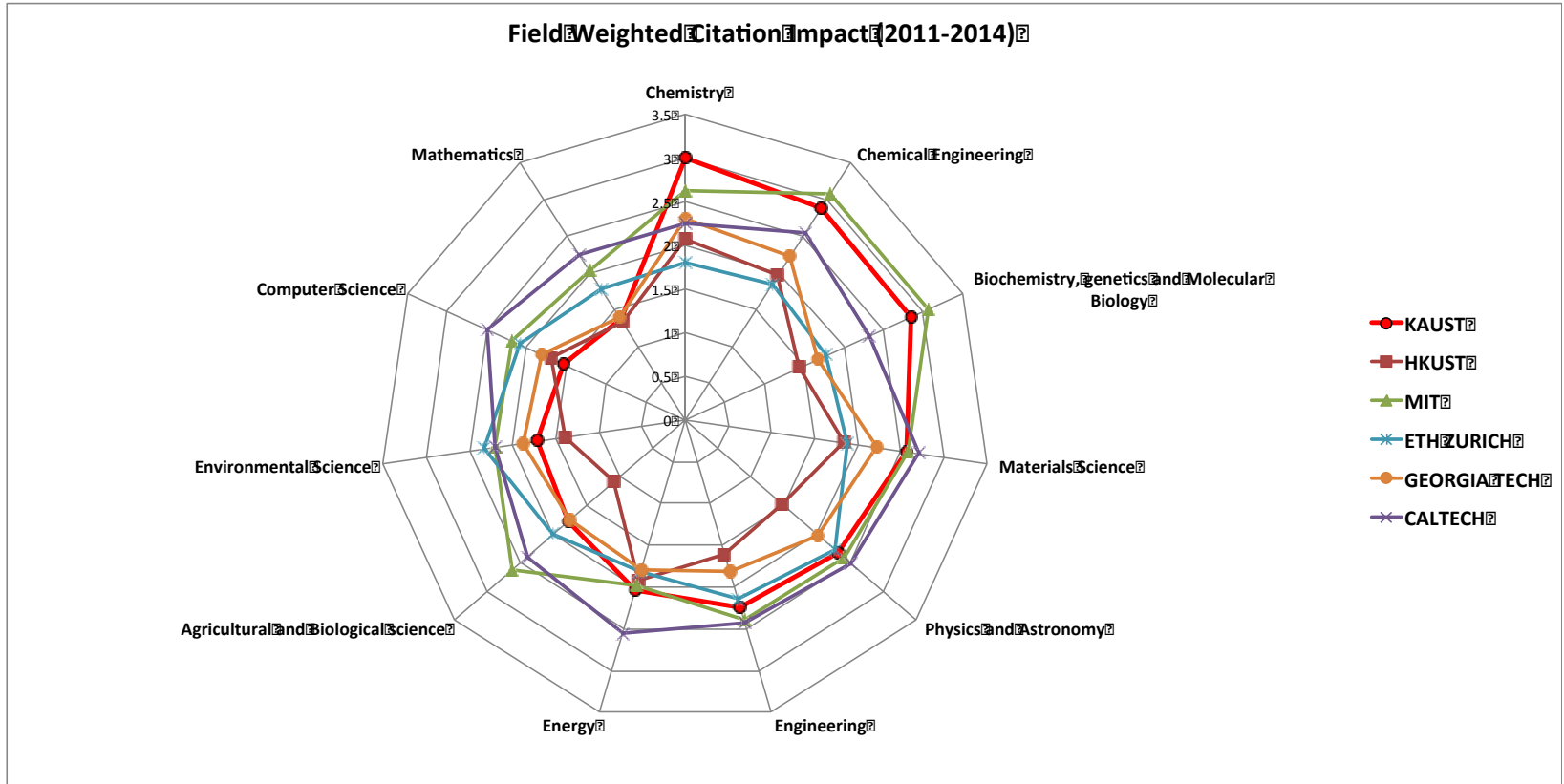
Material sciences





Benchmarking against other Universities outside the Kingdom

Based on Scopus data between 2011 and 2013 (excluding self-citations)





Role of Library Connecting the Pieces

- Institutional repository role in scholarly communication
- Institutional repository within the CRIS context
- Tracking research output: Article , conference paper, patent...
- Measuring impact
- **Trainings and awareness**

KAUST Research Repository development



- **Established in 2011**
- **Working in Prototype mode**
- **Official launch in September, 2012**
- **KAUST Theses/Dissertation open access policy December, 2012**
- **KAUST Open Access Policy June, 2014**
- **KAUST ORCID integration October, 2014**
- **KAUST Metrics improvement October, 2015**

How is research evaluated externally

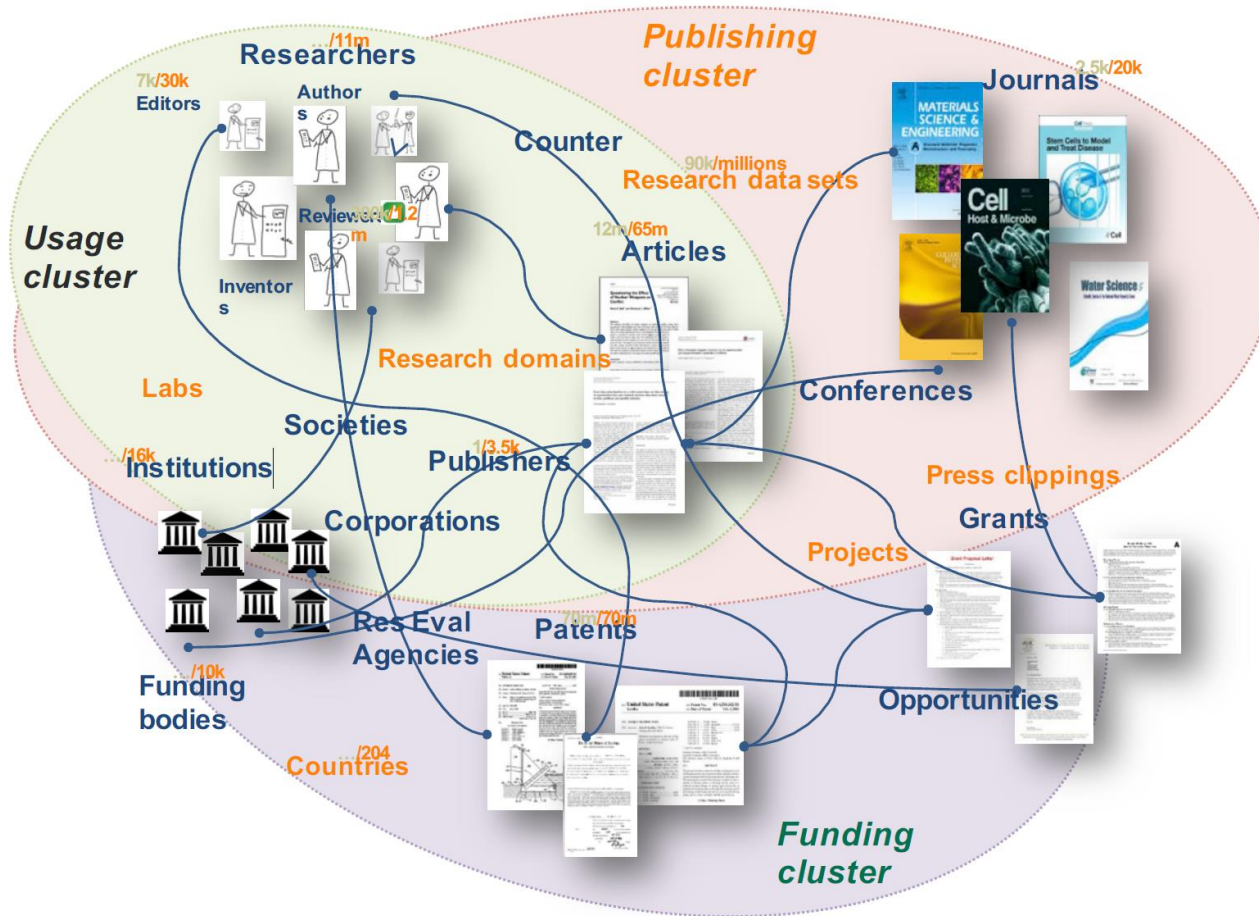


HOW IS RESEARCH EVALUATED?

- Research
 - Volume, income, reputation
- Prestigious awards
 - Nobel Prizes
- Innovation
 - Industry income and patents
- Teaching
 - Academic Reputation Survey, higher degrees
- International Mix
 - National / International staff and students
- Citation analysis
 - Normalised for volume and subject area
- Peer Evaluation
 - Reputational survey

<http://wok.mimas.ac.uk/support/documentation/presentations/1ResearchEvaluationBiblio1010.ppt>

Surviving in the Social Network of Science



- Typical needs:**
- Develop research strategy
 - Obtain funding
 - Acquire talent
 - Prioritize activities
 - Working efficiently
 - Measure/Demonstrate societal impact
 - Develop career
 - Publish
 - Find reviewers
 - Build reputation
 - Ranking
 - ...

Database coverage

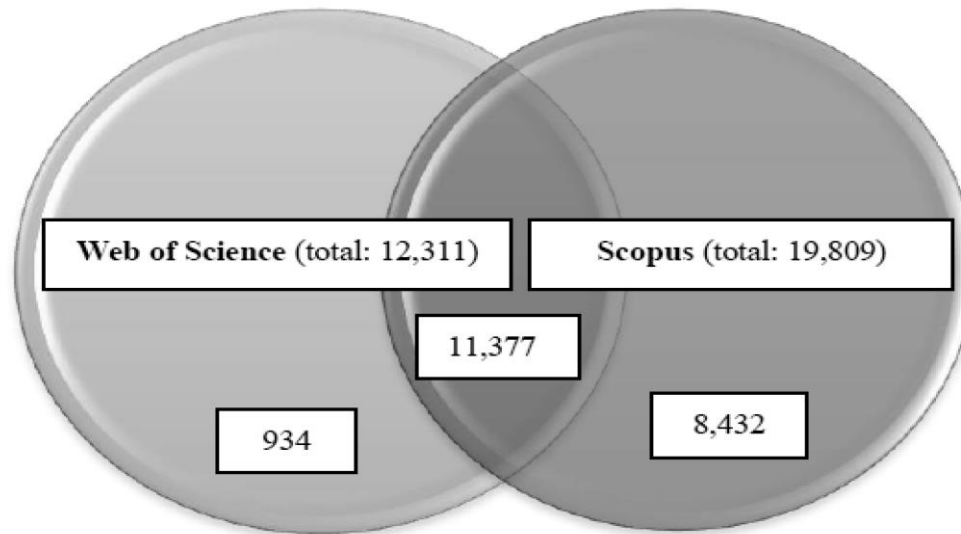
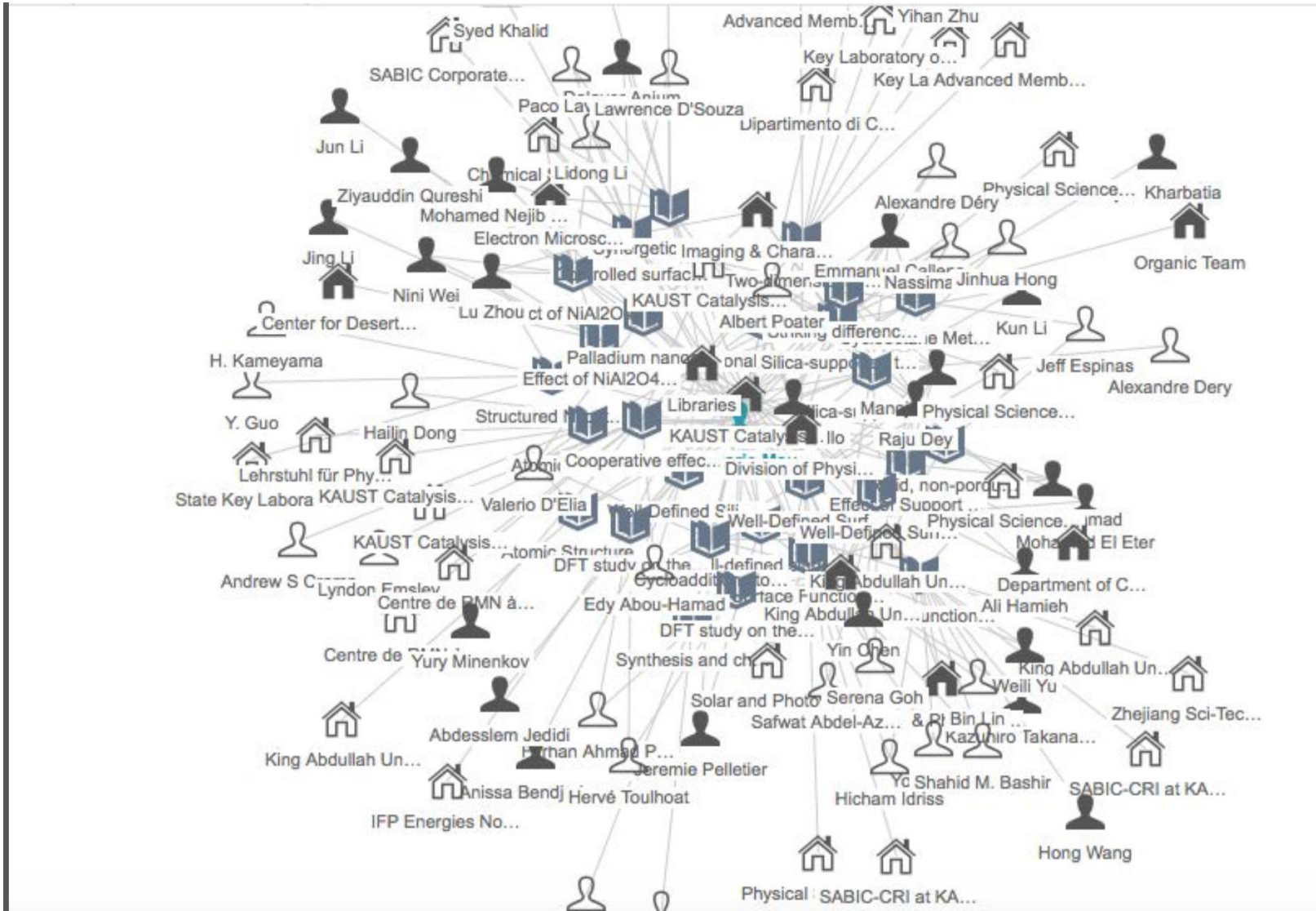


Figure 1. JISC-ADAT coverage comparison of Web of Science and Scopus

KAUST Research Evolution vision



What does the repository do?



- **Organize and present a comprehensive and up-to-date record of the university's published research.**
- **Increase access to and discovery of full text research outputs (thus increasing their use).**
- **Support tools to track and explore the ways in which research is being used and referenced.**

How do we find out what is being published?



➤ Sources:

➤ Databases/Indexes:

Crossref, Google Scholar, Scopus, Web of Science, PubMed Central, SHARE, JISC Router.

➤ Publisher APIs:

Sciencedirect (Elsevier), IEEE, Springer/Biomed Central, Nature, PLOS.

How do we find out what is being published?



- **Search based on:**
 - **Affiliation**

 - **Author name or ID**

 - **Funding acknowledgement**

How do we process what is retrieved?



➤ Steps:

- **Duplication**
- **Author identification and control**
- **Departmental control**
- **Full-text deposit**

How do we obtain the full-text of publications?



➤ Direct from publishers:

- Open Access journals (CC license)
- Journals with policies that allow redistribution of final publisher versions (as listed in Sherpa/Romeo)
- Articles in hybrid journals for which authors have purchased a CC license.
- Articles for which the journal has temporarily made available the accepted manuscript (with embargo based on journal policy).

How do we obtain the full-text of publications?

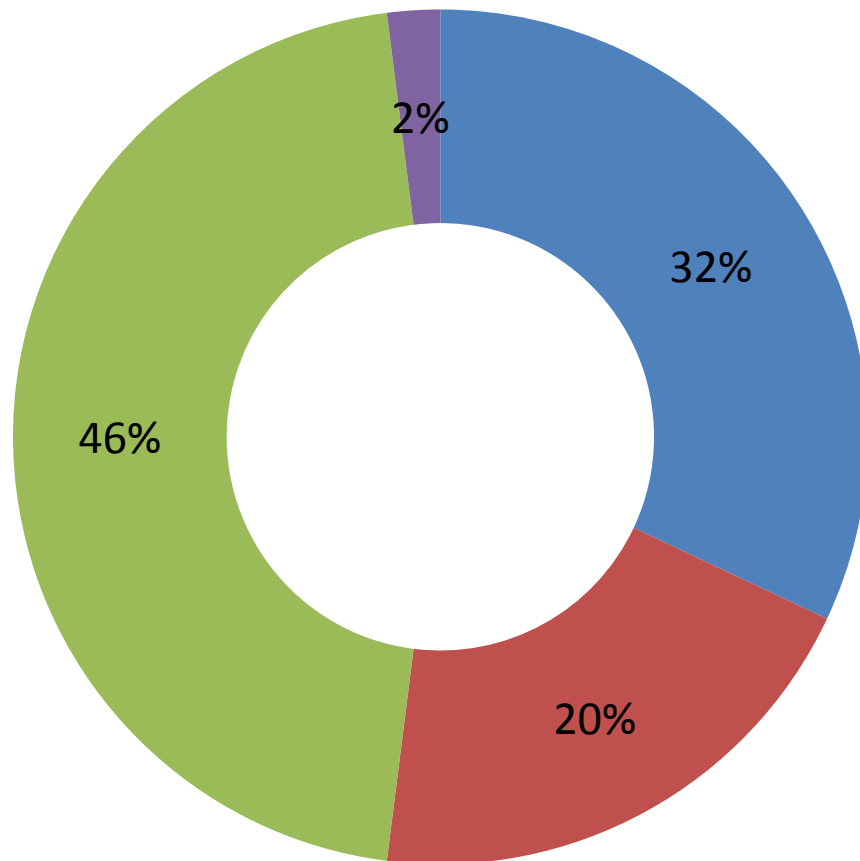


➤ From authors:

- **Direct deposit**
 - Especially of preprints and technical reports

- **In response to manuscript request email**
 - To all university co-authors
 - Required creation of email generation tool
 - Individual follow-up communication needed

Version and License of Items Published after Start of Open Access Policy with Full-text in the Repository



- Publisher version with CC license
- Publisher version deposit allowed by journal policy
- Accepted manuscript deposited
- Other versions or licenses



Today KAUST Repository Content

Peer reviewed articles



5385

2210

3275

Conference Papers



1144

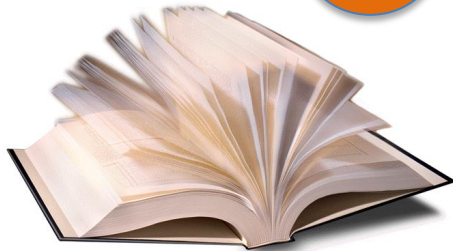
Theses/Dissertation



494

Book chapter

27



Technical Report

20



patent

6

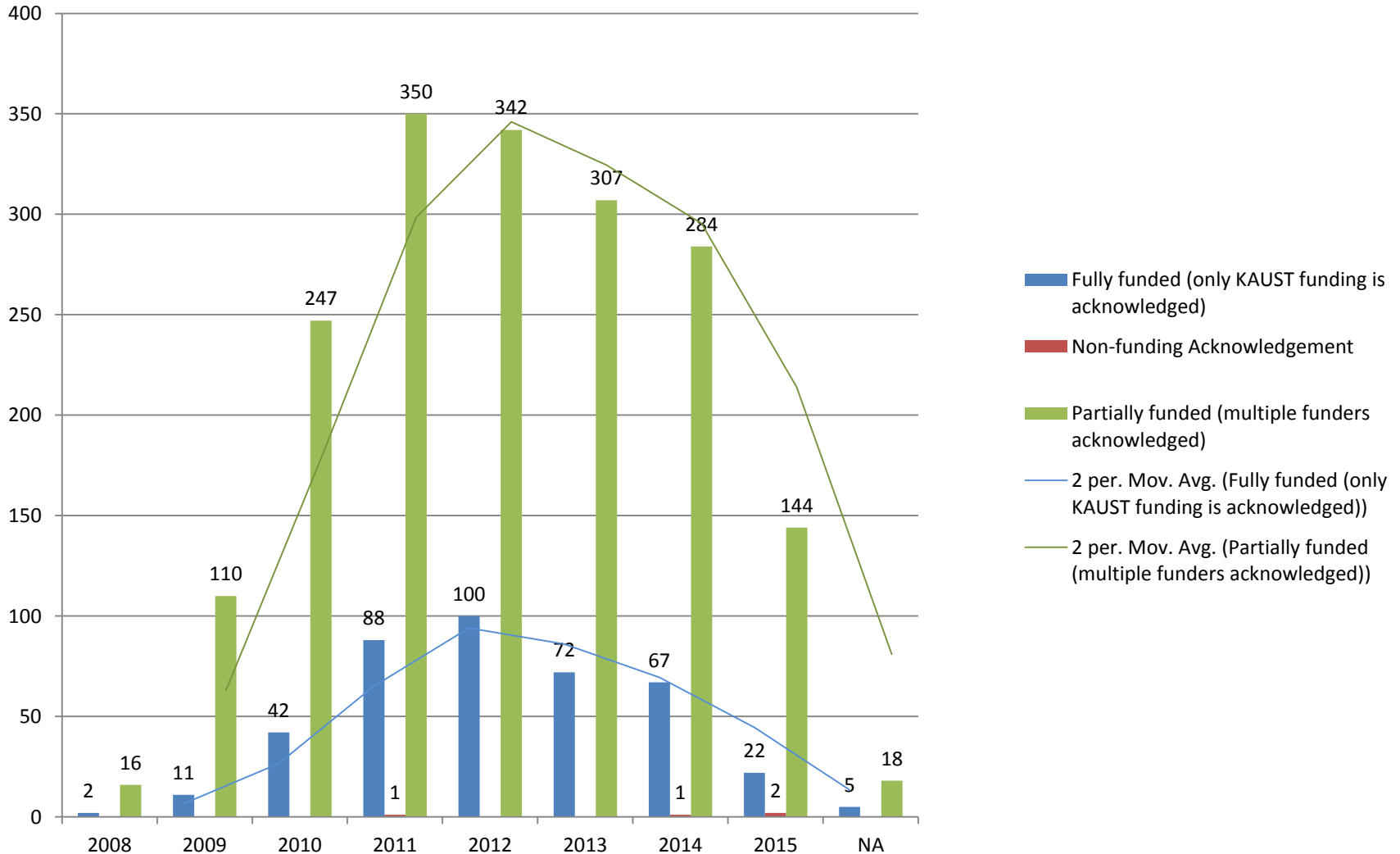


Posters

4

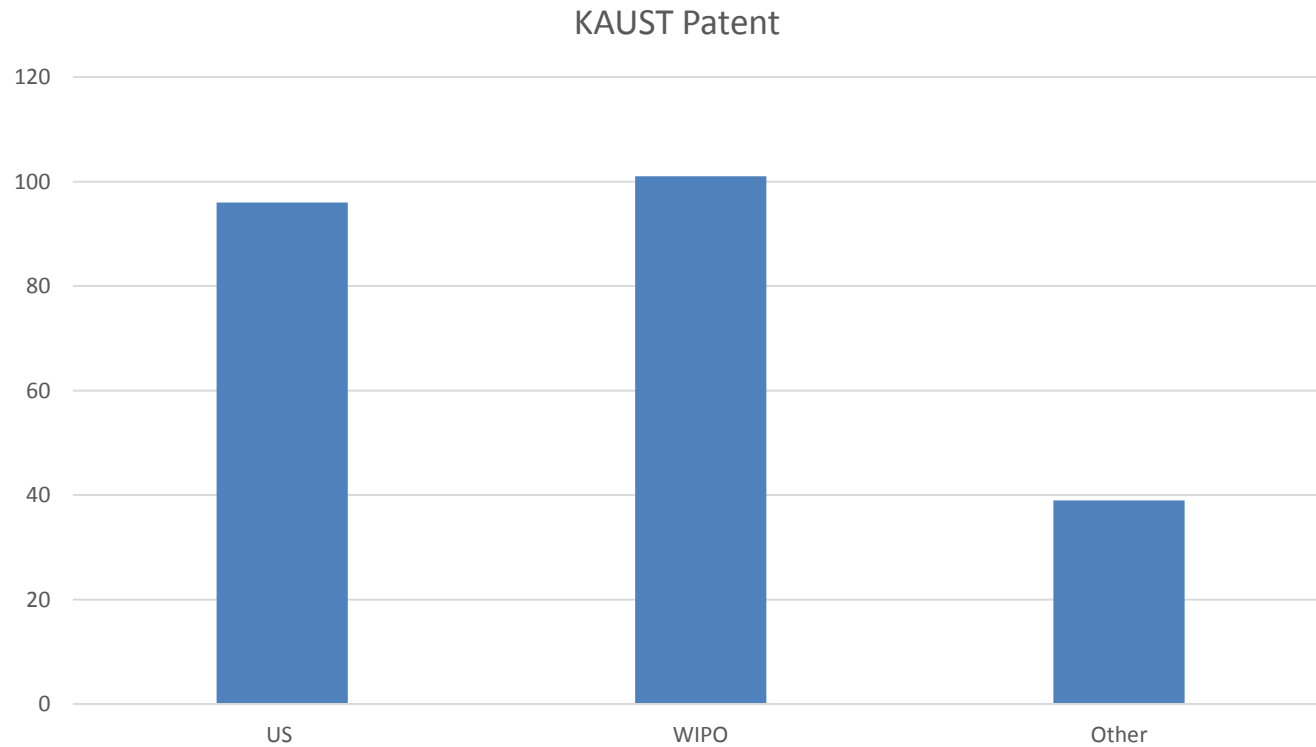


KAUST Funded Articles (Future content)





KAUST Patent Information Future content

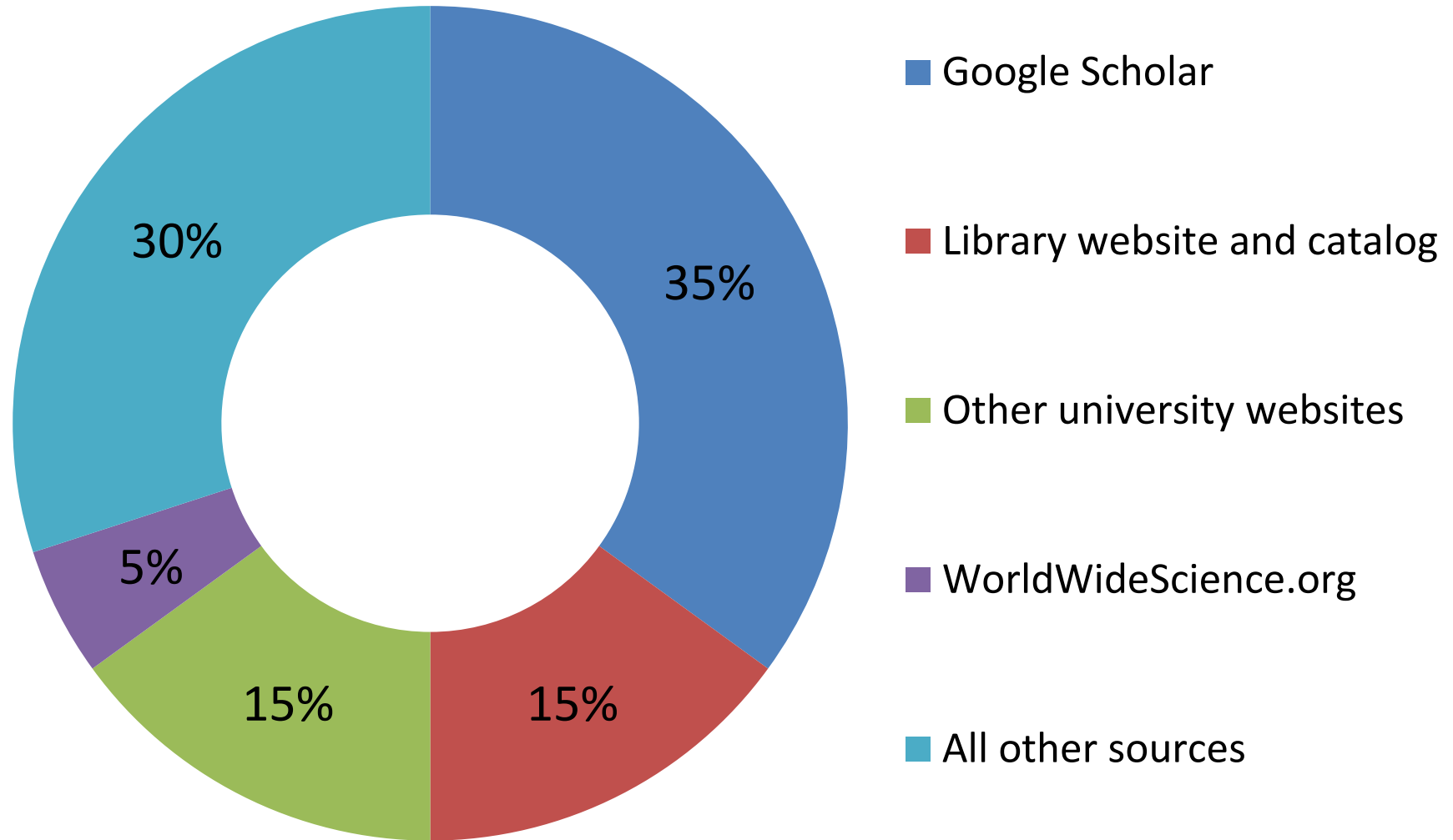


How do we spread information about what is in the repository?



- **Author ORCID records (via member integration)**
- **University websites (via RSS feeds)**
- **Crawled by search engines (primarily Google Scholar)**
- **Harvest by OAI-based search engines:**
 - **Library catalog**
 - **BASE (Bielefeld Academic Search Engine)**
 - **Woldcat's OAIster**
 - **NDLTD's Global ETD Search**
 - **OATD**
 - **WorldWideScience.org**

How do users arrive at the repository?





Repository add on features



Usage
 Clicks: 1
 Abstract Views: **128**
 HTML Views: **3707**
 PDF Views: **1136**

Captures
 Exports-Saves: **13**
 Readers: **11**

Social Media
 Tweets: **24**

Citations
 CrossRef: **3**
 PubMed: **1**
 Scopus: **1**

[see details](#)

Statistics

Item Statistics

Scopus



- Picked up by 7 news outlets
- Tweeted by 24
- On 3 Facebook pages
- 39 readers on Mendeley
- 2 readers on CiteULike

[See more details](#) | [Close this](#)

ORCID@KAUST



University systems can use ORCID[®]s for automated exchange of information with external systems, saving researchers time and keeping systems up-to-date.

How do we integrate with ORCID?



- Research Repository
 - Sample item display:

AUTHORS:

Melino, Gianluca (0000-0001-8060-651X) 

ADVISORS:

Di Fabrizio, Enzo (0000-0001-5886-4678) 

COMMITTEE MEMBER:

Alshareef, Husam N. (0000-0001-5029-2142)  ; Falqui, Andrea (0000-0002-1476-7742) 

- Add ORCID IDs for authors as well as other roles.
- Retrieve ORCID IDs from Crossref by DOI when available.
- Search by ORCID ID.
- Link to ORCID records.

How do we integrate with ORCID?



- **KAUST/ORCID Integration:**

ORCID at KAUST

KAUST uses ORCID identifiers to identify researchers and their research. Select from the options below before connecting to the ORCID system.

- Create a new ORCID ID or identify an existing one (required).
- Read information from my ORCID record.**
- Add KAUST affiliation to my ORCID record.**
- Add publications from the KAUST Repository to my ORCID record.**

You can change these permissions at any time in the Accounts Settings section of your ORCID record.

[Connect with ORCID](#)

- Send custom ORCID creation email.
- Researchers grant permissions to KAUST.
- Daily update of ORCID record with new works in the repository.

Is our Integration with ORCID Successful?



- All theses and dissertations for the last year have an ORCID ID for the student author.
- 75% of articles and conference papers in the repository have an ORCID ID for at least one author.
- 78% of current faculty have an ORCID ID.
- 82% of KAUST researchers and students with an ORCID ID have granted permissions through the KAUST/ORCID integration.

How are we supporting the adoption of a current research information system?



- Transfer of repository metadata to Pure:
 - Custom tool to create CERIF XML for import.
- Enable deposit into the repository via Pure:
 - Work in progress.
- Stability and flexibility of repository complement the robust reporting and analytics possible through Pure.

PlumX@KAUST



Track and explore a more comprehensive landscape of research and how it is shared and used.

1. More types of research outputs:

Presentations, videos, posters, code, datasets, patents, technical reports, theses, dissertations...

In addition to articles, conference papers, book chapters, books...

2. More types of metrics:

- [Usage](#) (downloads, views, etc.)
- [Captures](#) (bookmarks, bibliographic reference exports, forks, etc.)
- [Citations](#) (from multiple sources)
- [Mentions](#) (comments, reviews, blog mentions, news mentions, etc.)
- [Social media](#) (likes, shares, tweets, etc.)

How does the connection between PlumX and the repository work?



- Repository retrieves PlumX widget based on DOI or Handle for display for individual items.
- PlumX retrieves works from the repository via OAI harvest and matches them to faculty and research scientist profiles based on ORCID ID.
- PlumX retrieves download and abstract view stats from the repository and combines them with stats from other sources for each item.

What does it look like in the repository?



KAUST Repository

Home Browse About Submit an Item

Adv

KAUST Repository > Research > Articles >

Recent reversal in loss of global terrestrial biomass

This item has been cited 4 time(s). (data provided by [Scopus](#))

HANDLE URI:

<http://hdl.handle.net/10754/564113>

TITLE:

Recent reversal in loss of global terrestrial biomass

AUTHORS:

Liu, Yi Y.; Van Dijk, Albert I J M; De Jeu, Richard A M; Canadell., Josep G.; McCabe, Matthew (0000-0002-1279-5272)  ; Evans, Jason P.; Wang, Guojie

ABSTRACT:

Vegetation change plays a critical role in the Earth's carbon (C) budget and its associated radiative forcing in response to anthropogenic and natural climate change. Existing global estimates of aboveground biomass carbon (ABC) based on field survey data provide brief snapshots that are mainly limited to forest ecosystems.

- Export
- Share
- Statistics



PLUMX

Usage
Clicks: **8**
Abstract Views: **275**
Link-outs: **6**

Captures
Exports-Saves: **3**
Readers: **307**

Mentions
Comments: **1**
News Mentions: **1**

Social Media
Likes: **16**
Shares: **5**
Tweets: **9**

Citations
PubMed: **29**
Scopus: **121**

[see details](#)



How to explore further for an item?

USAGE ^

3332

HTML Views ☺	2529
PLoS	2308
PubMedCentral	184
EBSCO	37
PDF Views ☺	402
PLoS	237
EBSCO	121
PubMedCentral	44
Abstract Views ☺	392
EBSCO	391
DSpace	1

CAPTURES ^

58

Exports-Saves ☺	39
EBSCO	39
Readers ☺	19
Mendeley	19

MENTIONS ^

104

Comments ☺	101
Facebook	101
Blog Mentions ☺	1
Blog	1
Links ☺	1
Wikipedia	1
News Mentions ☺	1
News	1

CITATIONS ^

62

Cited by ☺	62
Scopus	62
PMCEurope	42
CrossRef	36
PubMed Central	36

SOCIAL MEDIA ^


51

Tweets ☺	21
www.nature.com	21
Likes ☺	17
Facebook	17
Shares ☺	9
Facebook	9
+1s ☺	4
Google+	4



What can we see in the dashboard?

1. Groups for divisions, programs, core labs and research centers.
 - Sort and filter by metrics types, artifact types and year.

-  metrics up.
hershers

1. Ir
W



More analysing!!!

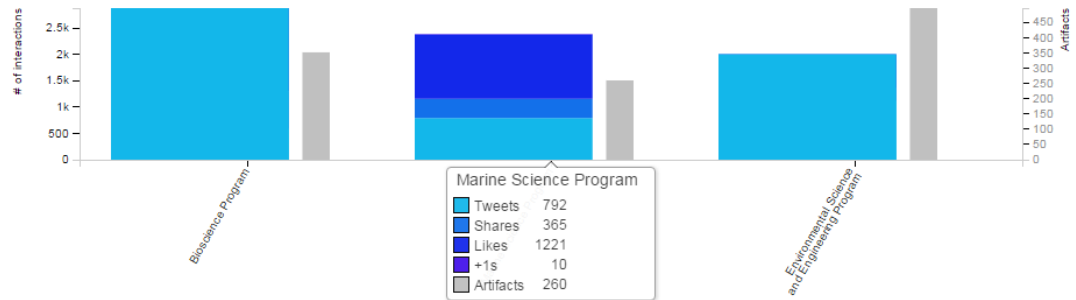


Sample analytics views: subgroups and researchers

Subgroups Overview - Biological and Environmental Sciences and Engineering (BESE) Download as...

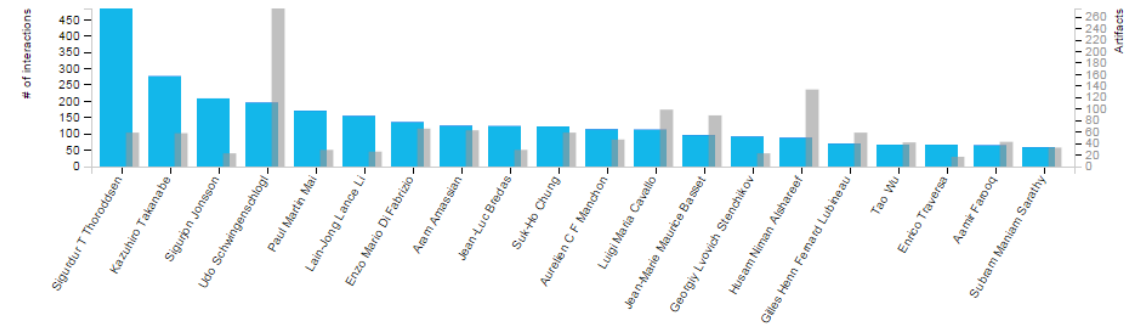
Division

Social Media



Researchers Overview - Physical Sciences and Engineering (PSE) Division Download as...

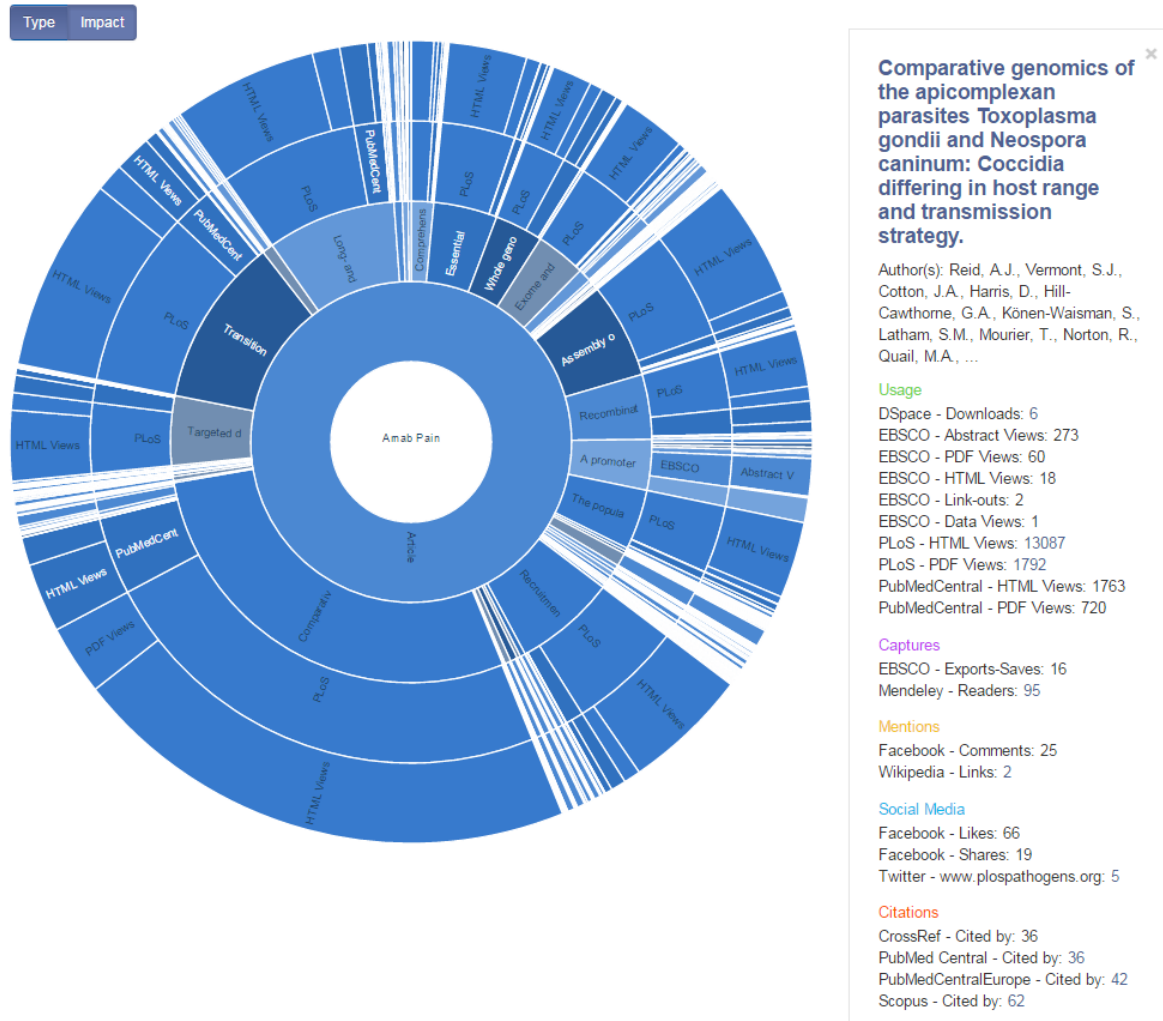
Social Media



Sample analytics view: Individual



Sunburst - Arnab Pain



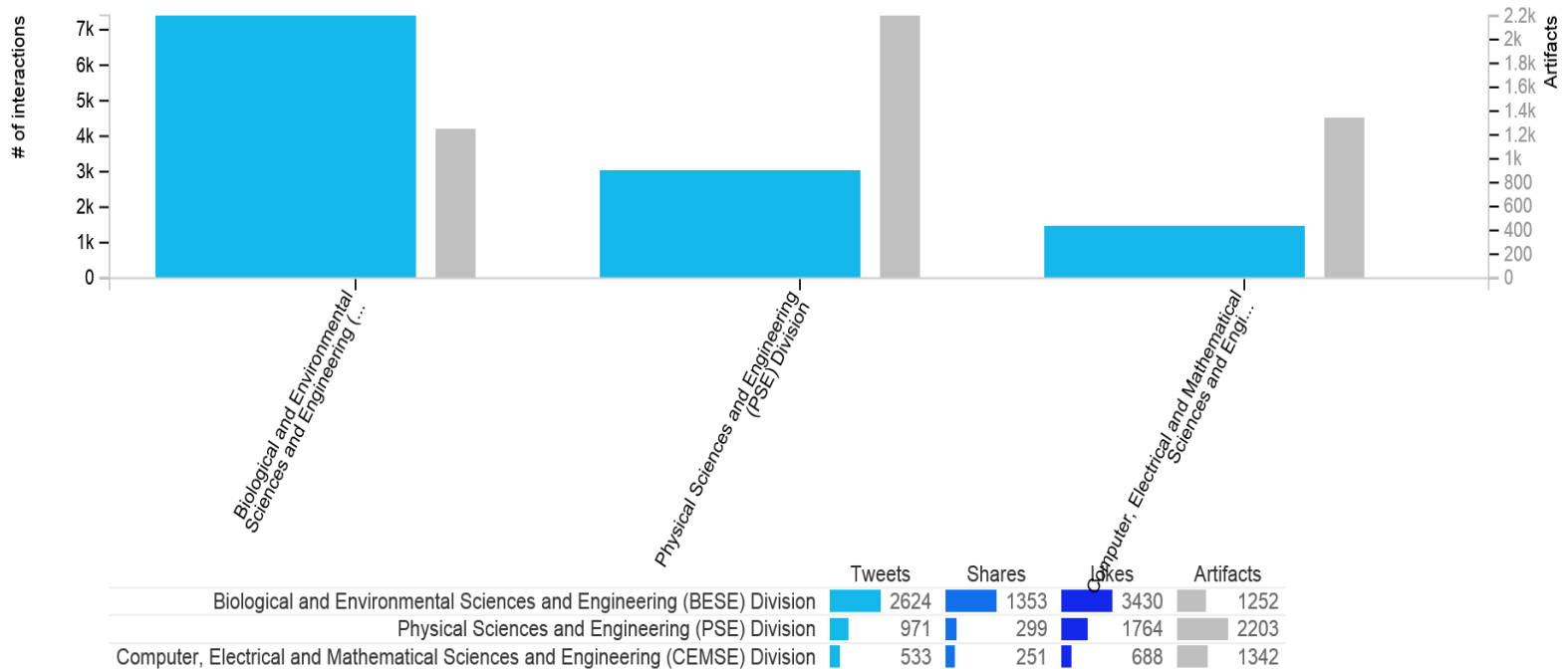
KAUST Articles in Social Media by division



Subgroups Overview - Academic Divisions

Download as... ▾

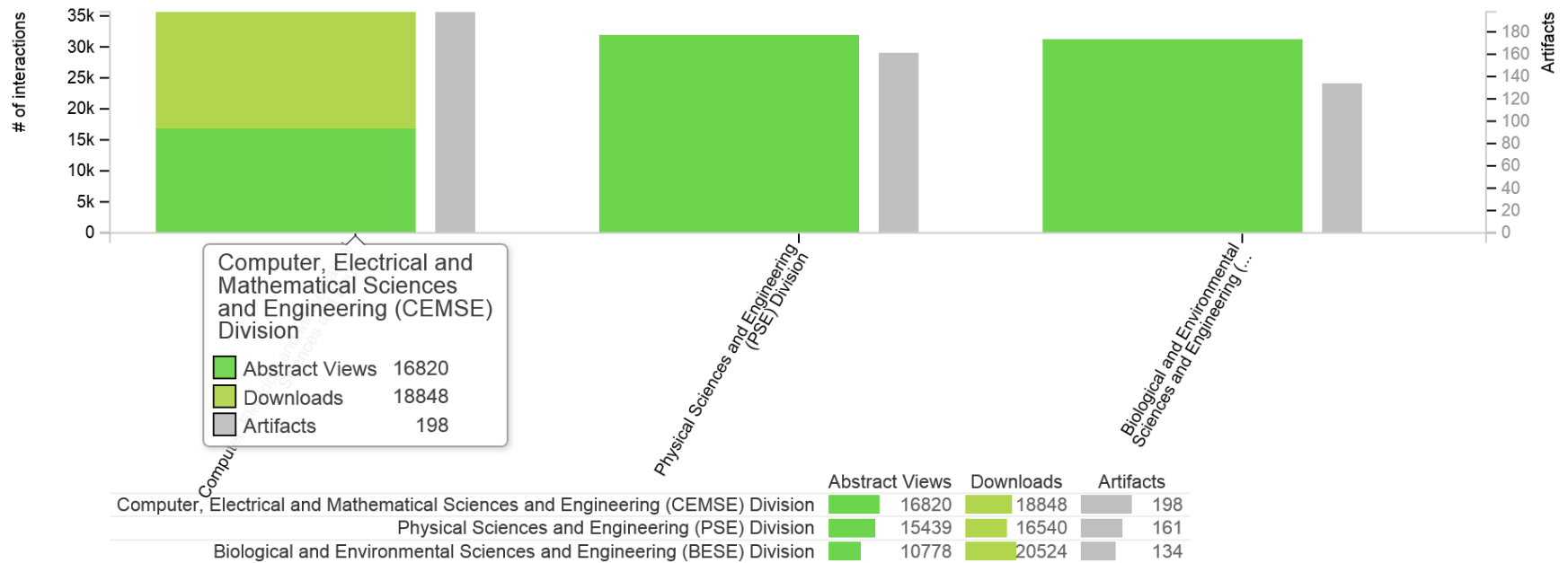
Social Media



Theses/ Dissertation usage by division

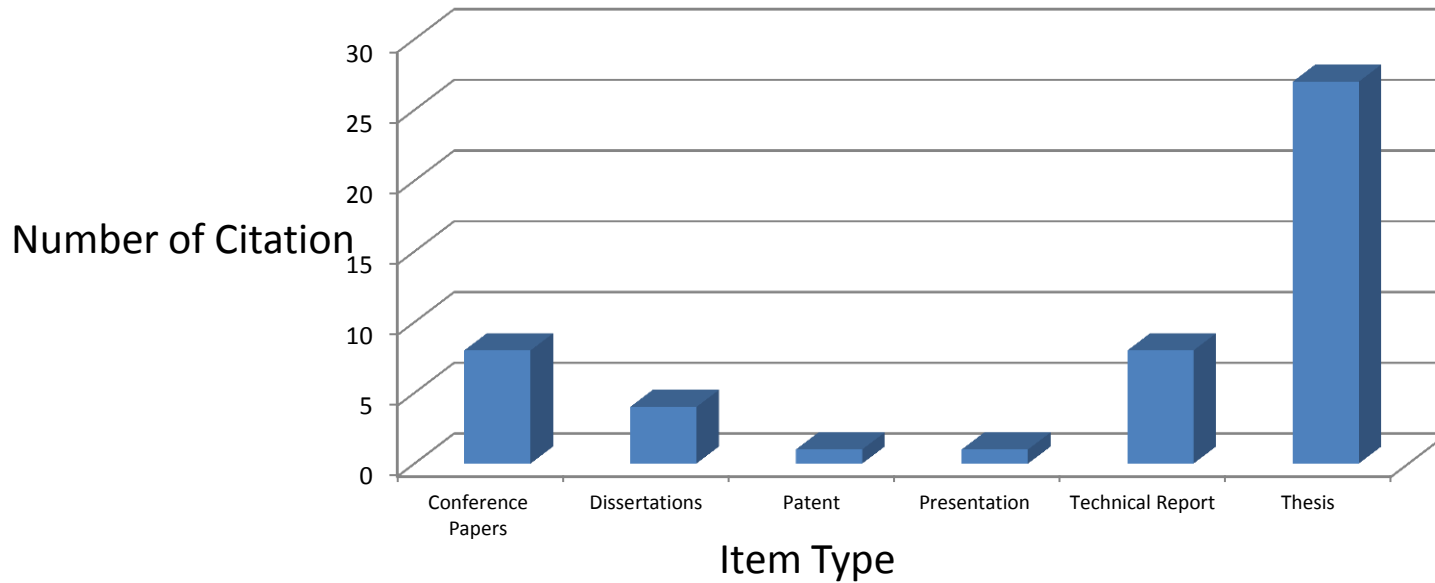


Usage





Repository unique material citation Based in google scholar





Academic Integrity and
Citation Management



Improve Research Skills

Increase Research Impact

Multi-Disciplinary Citation
Resources



Library Trainings, Campus Out Reach

- Citation databases in the literature search
- Citation metrics (h-Index, Impact Factor)
- Publications and institutional rankings
- Researcher profiling (ORCID, PLUMX.)
- Open access and Institutional Repository
- Academic honesty, Plagiarism

OPEN ACCESS WEEK

المركز القومي للأبحاث
مكتبة الملك عبد الله
جامعة الملك عبد الله
للساكنة والعلوم
وتكنولوجيا
Library





Benefits (as per the Feedbacks)

Researchers

- Improves their understanding of how to communicate their research
- Helps to have organized scholarly profile and presence
- Guides to navigate in the complex aspects of the changing scholarly communications landscape
- Helps in connecting the pieces of the research life cycle

Institution

- Enhancing the profile of individual researchers will improve their research impact and the reputation of our institution,
- Helps in research funding, faculty evaluations and recruitment.



Future

- Digital preservation and long term-retention of special items.
- Special Digital Collections (biological image collections, GIS images, etc.)
- More training programs within the university.
- More outreach programs in the region.
- Promote good practices in Research Data Management (RDM).
- Services and initiatives around RDM.
- Increased importance of Reputation Management
- Evolving scholarly record – transition from an article to a package (of article and associated video, data, software methods, other media etc)



King Abdullah University of
Science and Technology



KAUST

Thank you



KAUST Library • *Where inspiration is born*

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