

Identity, Collaboration, and Impact:

Enhancing Research With Open,
Integrated Digital Systems

Dr. Bruce Herbert, Director
Office of Scholarly Communications

Scholarly Communications

Digital and networking technologies are prompting significant change and opportunity in the **publication** and scholarly communications process. These **disruptive technologies** are causing the academy to assess the traditional role of commercial publishers, copyright, fair use, rankings of journals and the process of peer review.



<http://misc.jisc.ac.uk/>

While **challenging**, the changes also present exciting **opportunities** for fundamental **improvement** to the scholarly communications process.

Scholarly Communications

Academic/research libraries are seeking to **work with faculty** to influence and promote **positive change** so that access to scholarly information continues its vital role in research and scholarship with changes that:

- Improve access
- Strengthen author/faculty rights
- Decrease costs
- Enhance scholarship



The top 50 word wordle.net cloud of terms from *Transforming Scholarly Communication*, an Workshop co-hosted by Harvard University & Microsoft Research (New England).
<http://msrworkshop.tumblr.com/tagged/resources>

Serving the 21st Century Scholar

Bapst Library - Boston College



Ironman's Multitouch Wall Computer Interface



Most Beautiful College Libraries

<http://www.campusgrotto.com/most-beautiful-college-libraries.html>

TAMU Strategic Planning

TAMU's embarking on the final phase of **Vision 2020: Creating a Culture of Excellence.**

To achieve this vision, TAMU will:

- ❑ Provide an outstanding educational experience for all students
- ❑ Produce impactful new knowledge, innovations, and creative works
- ❑ Place the needs of the public good at the forefront of our mission



Strategic Planning 2015-2020

We are embarking on the final phase of **Vision 2020: Creating a Culture of Excellence**, which articulates Texas A&M University's bold recognition of necessary institutional evolution required to achieve its mission as a land, sea, and space grant institution of global preeminence. Adopted in 1999, with an explicit vision for acceptance as a consensus leader among peer public institutions, more than 250 stakeholders worked to identify benchmarks, which if achieved, would enhance the value of Texas A&M to The Texas A&M University System, the State of Texas, and the nation.

The next five years will be critically important for Texas A&M University. The University as a whole – including all colleges and divisions – is currently formulating strategic plans for the period leading up to 2020. It is vital that all our planning efforts be as coordinated and inclusive as possible. To that end, the Office of the Provost, the Faculty Senate and the Council of Principal Investigators are jointly convening four planning forums, open to all faculty and staff and also broadcast by TTVN to our campuses outside College Station. The forums will be brown bag, with drinks provided.

Strategic Planning Process

[Download PDF of Strategic Planning Process.](#)

Strategic Planning Open Forums

The forums will be organized as follows:

Forum 1 Tuesday, Feb. 10, 11:30 a.m. - 1 p.m., Rudder 601
Overview with discussion of university academic goals and measures of success

[\[Download PDF of Highlights of Forum 1.\]](#)

[\[Download PDF of Dr. Watson's PowerPoint slides.\]](#)

[\[Click here to watch video recording of the forum.\]](#)

Forum 2 Thursday, Feb. 26, 11:30 a.m. - 1 p.m., Rudder 601
Dialogue on Texas A&M's strengths and inhibitors, both internal and external

[\[Download PDF of Highlights of Forum 2.\]](#)

[\[Click here to watch video recording of the forum.\]](#)

Note: There is a delay between the beginning of the audio recording and the start of the video recording.

Forum 3 Friday, March 13, 11:30 a.m. - 1 p.m., Rudder 601

Dialogue on strategies for excellence at Texas A&M

[\[Download PDF of PowerPoint Slides.\]](#)

[\[Click here to watch video recording of the forum.\]](#)

TAMU Strategic Planning, 2015-2020

[http://provost.tamu.edu/initiatives/
strategic-planning-2015-2020](http://provost.tamu.edu/initiatives/strategic-planning-2015-2020)



LIBRARIES
TEXAS A&M UNIVERSITY

TAMU Strategic Planning: Research

WE CAN DO EVEN BETTER.

Among our Vision 2020 peers, we are 13th in total research expenditures, 18th in federal research expenditures, 15th in faculty with prestigious awards, 18th in number of National Academy members, and 18th in citations for our scholars' work.

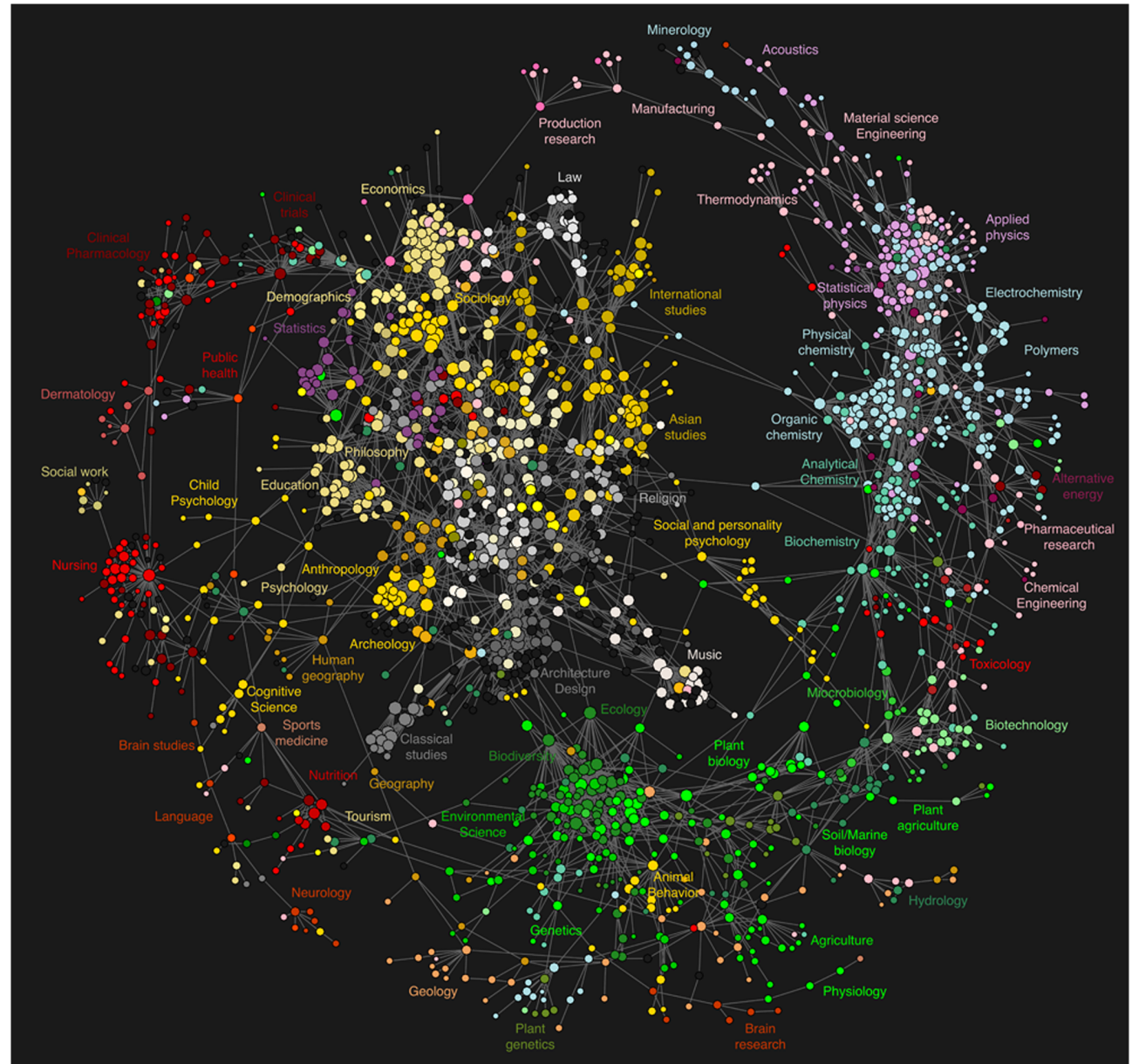
To improve, TAMU will enhance:

- Multidisciplinary programs especially areas of grand challenges
- Research, funding, and faculty awards
- Research facilities



Defining Goals Diversity in Disciplinary Communities

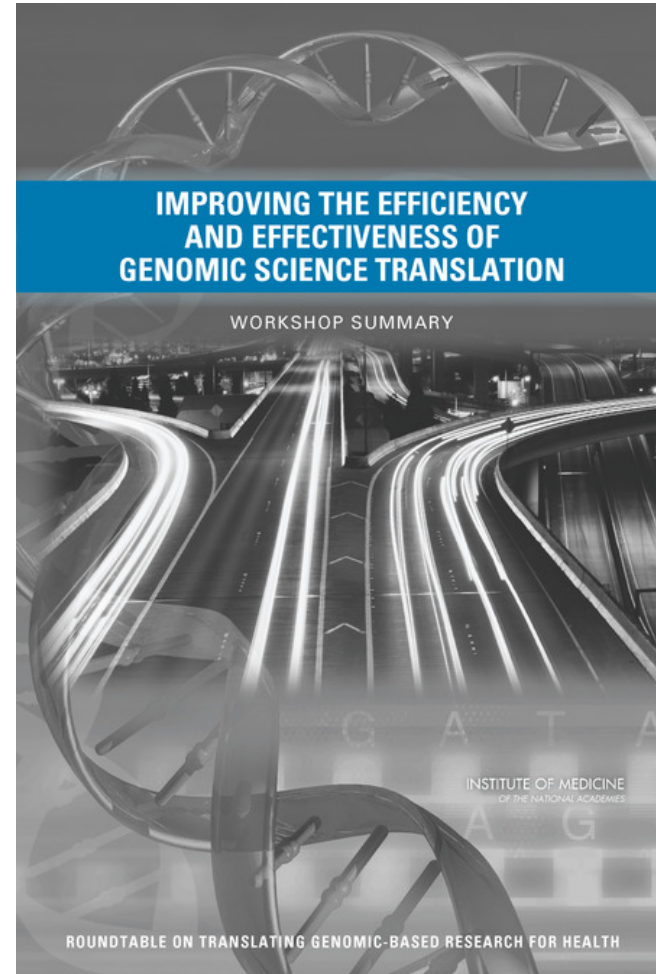
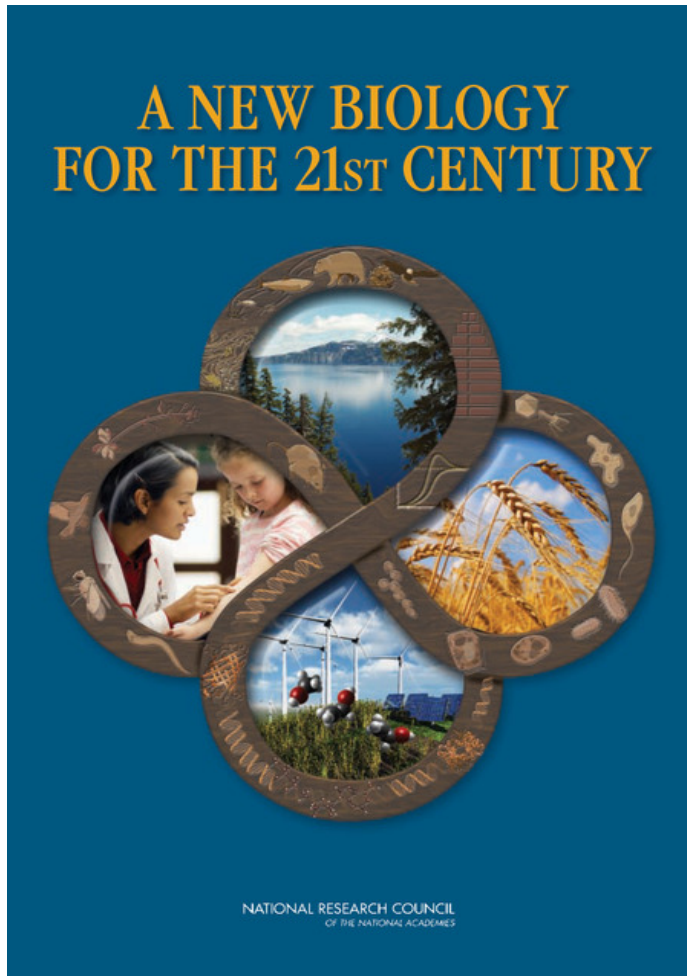
Maps of science resulting from large-scale clickstream data provide a detailed, contemporary view of scientific activity.



Bollen, J., H. Van de Sompel, A. Hagberg, L. Bettencourt, R. Chute, et al. (2009). Clickstream Data Yields High-Resolution Maps of Science. PLoS ONE 4 (3): e4803. doi: 10.1371/journal.pone.0004803.

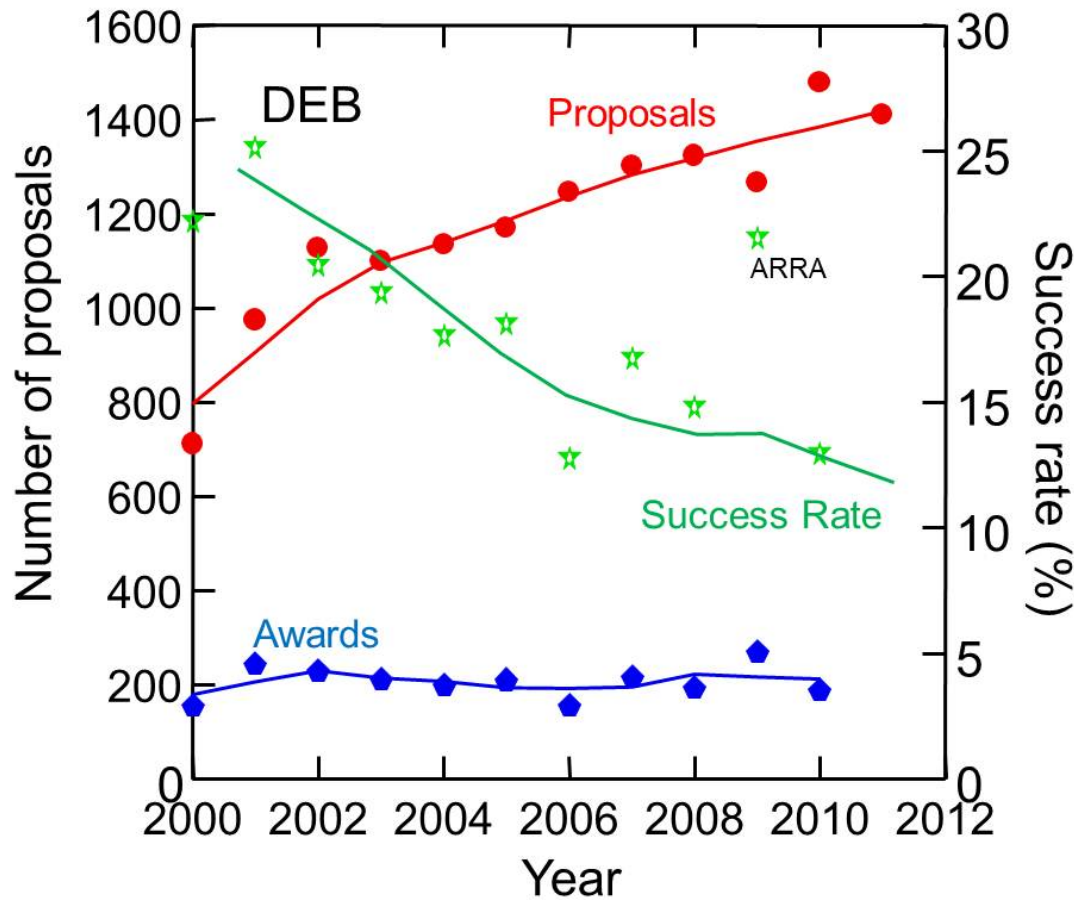
Research Has Evolved

Expectations Transformative & Translational Research



Trends in Funding

NSF Division of Environmental Biology



Proposals keep increasing.
(Success keeps decreasing, since awards have not changed.)

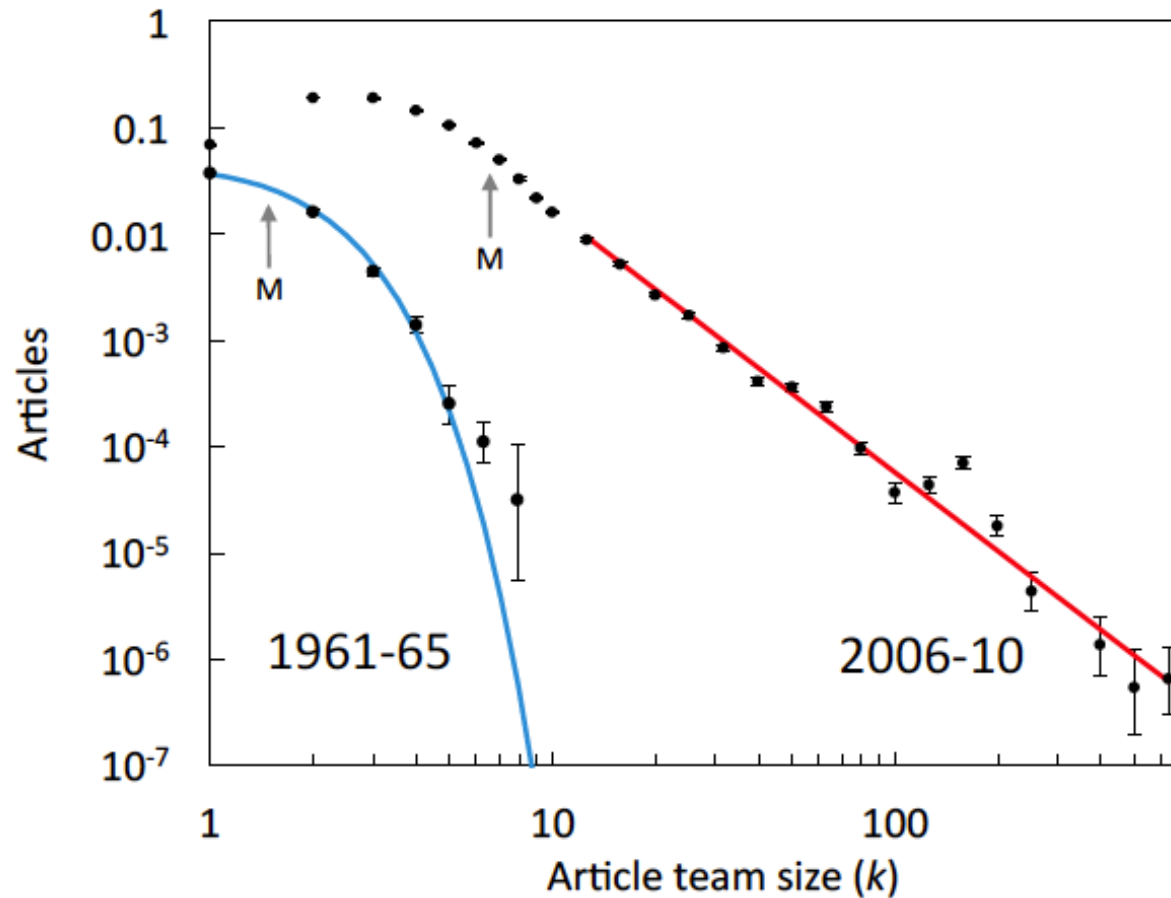
Public Access to Research

- ❑ **Open Access** literature is digital, online, free of charge, and free of most copyright and licensing restrictions
- ❑ Works are still covered by copyright law, but Open Access terms apply to allow sharing and reuse
- ❑ All major OA initiatives for scientific and scholarly literature insist on the importance of peer review
- ❑ Emerging **federal mandates** for **public access** to publications and data

The screenshot shows a blog post from the White House website. The header includes the White House logo and navigation links. The main content area features the title "Expanding Public Access to the Results of Federally Funded Research" with a "Subscribe" button. Below the title is the author "Michael Stebbins" and the date "February 22, 2013 at 12:04 PM EST". There are social media sharing buttons for E-Mail, Tweet, and Share. The main text discusses the Obama Administration's commitment to public access to research results. On the right side, there are two promotional boxes: "GIVE FEEDBACK ABOUT THIS PAGE" and "YOUR FEDERAL TAXPAYER RECEIPT".

<http://www.whitehouse.gov/blog/2013/02/22/expanding-public-access-results-federally-funded-research>

Evolution of Research Teams



Milojevic (2014). PNAS 111(11): 3984-3989.

Fig. 1. Distribution of article team sizes in astronomy in two time periods separated by 45 y. The distribution from 1961 to 1965 is well described by

Collaboration Across Institutions

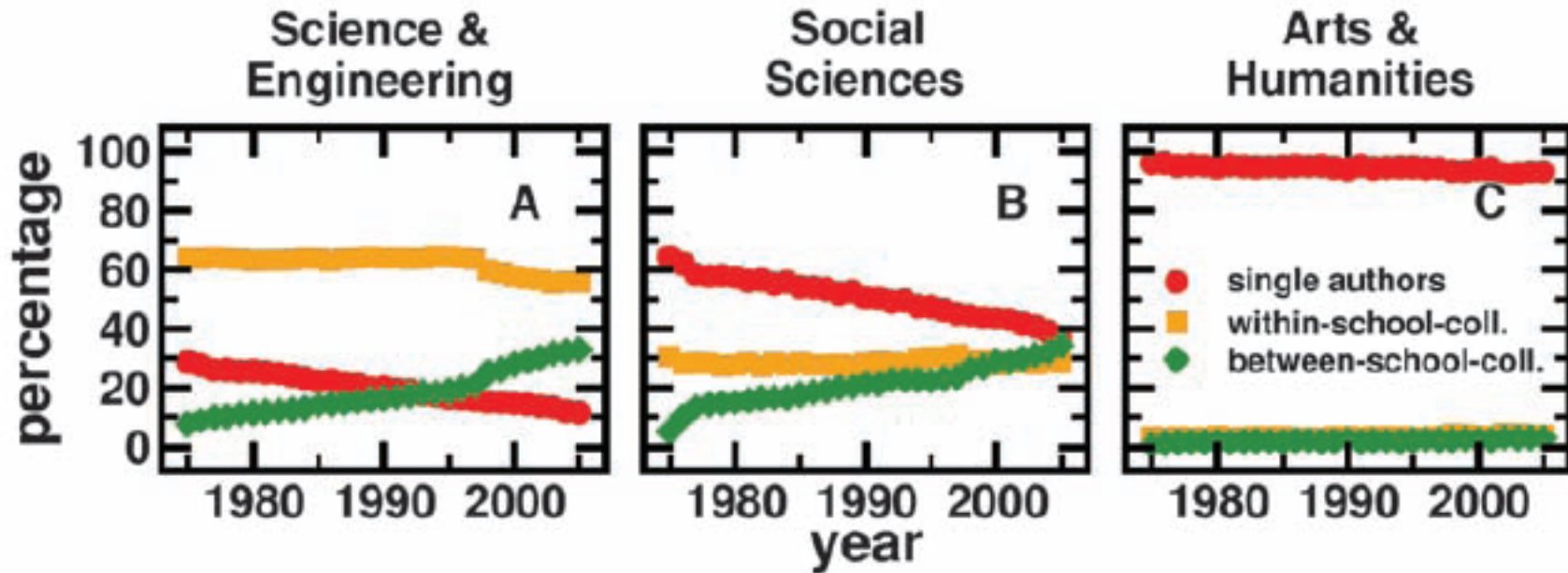


Fig. 1. The rise in multi-university collaboration. By comparing the incidence of papers produced by different authorship structures, we see that the share of multi-university collaborations strongly increases from 1975 to 2005. This rise is especially strong in SE (A) and SS (B), whereas it appears weakly in AH (C), in which collaboration of any kind is rare. The share of single-university collaborations remains roughly constant with time, whereas the share of solo-authored papers strongly declines in SE and SS.

Jones et al. (2008). *Science* 322: 1259-1262.

Practices Impact of Research Teams

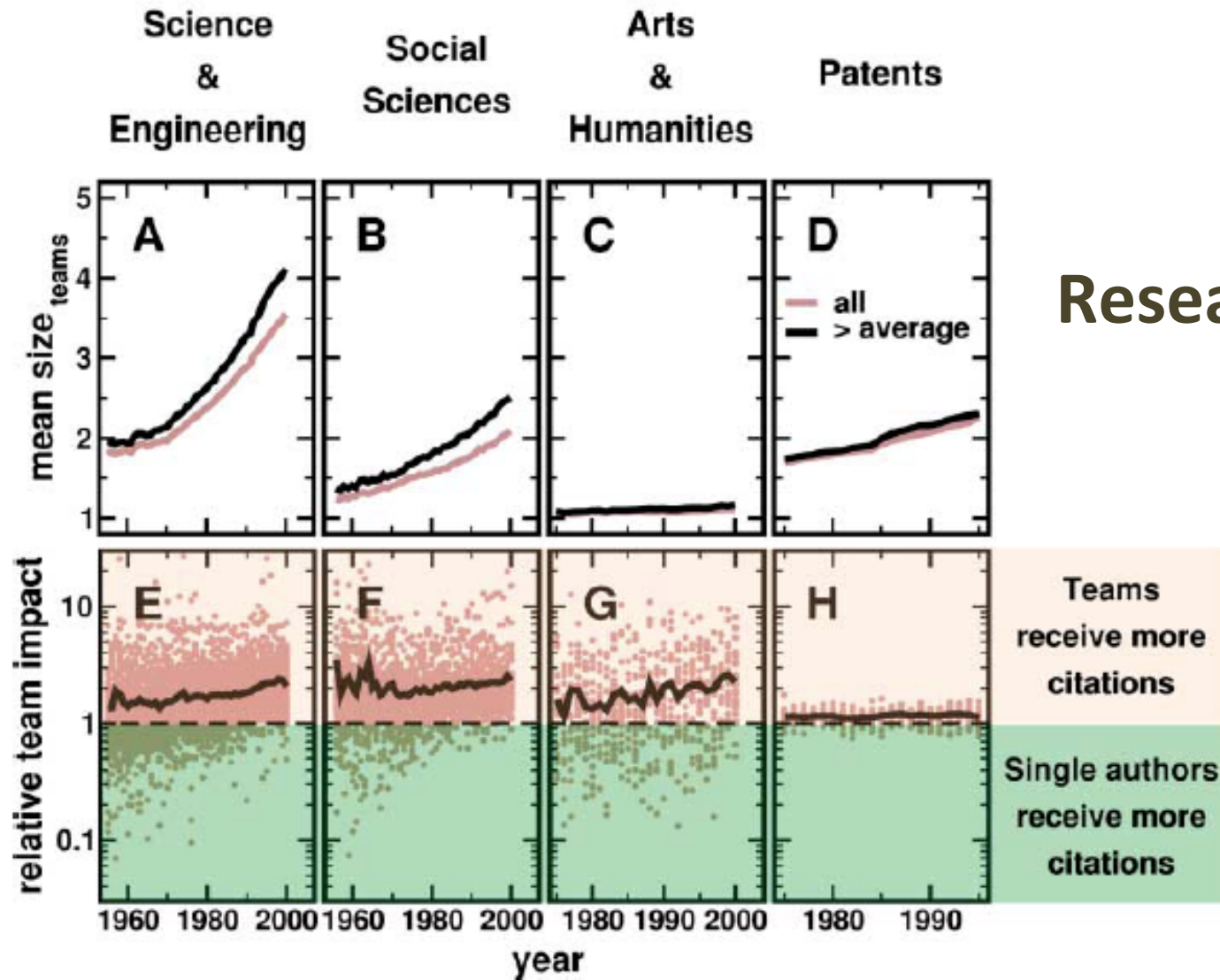
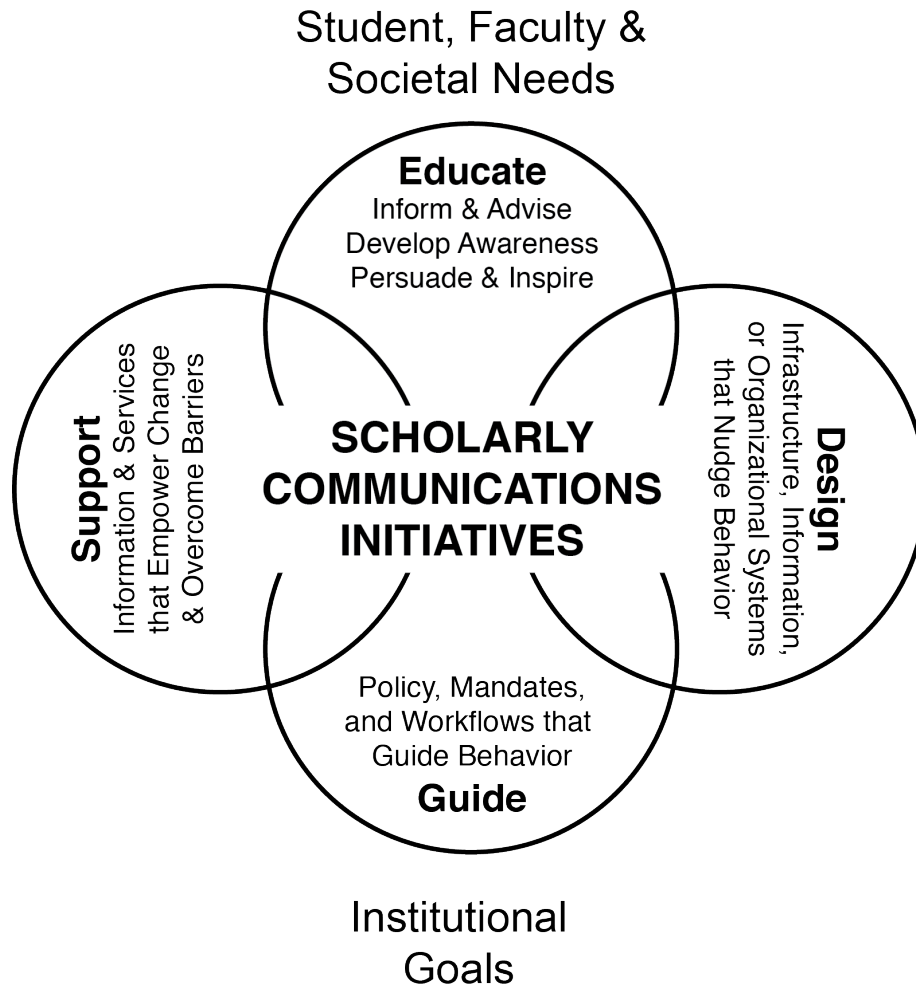


Fig. 2. The relative impact of teams. (A to D) Mean team size comparing all papers and patents with those that received more citations than average in the relevant subfield. (E to H) The RTI, which is the mean number of citations received by team-authored work divided by the mean number of citations received by solo-authored work. A ratio of 1 indicates that team- and solo-authored work have equivalent impact on average. Each point represents the RTI for a given subfield and year, whereas the black lines present the arithmetic average in a given year.

Wuchty et al. (2007).
Science 316(5827):
1036-1039.

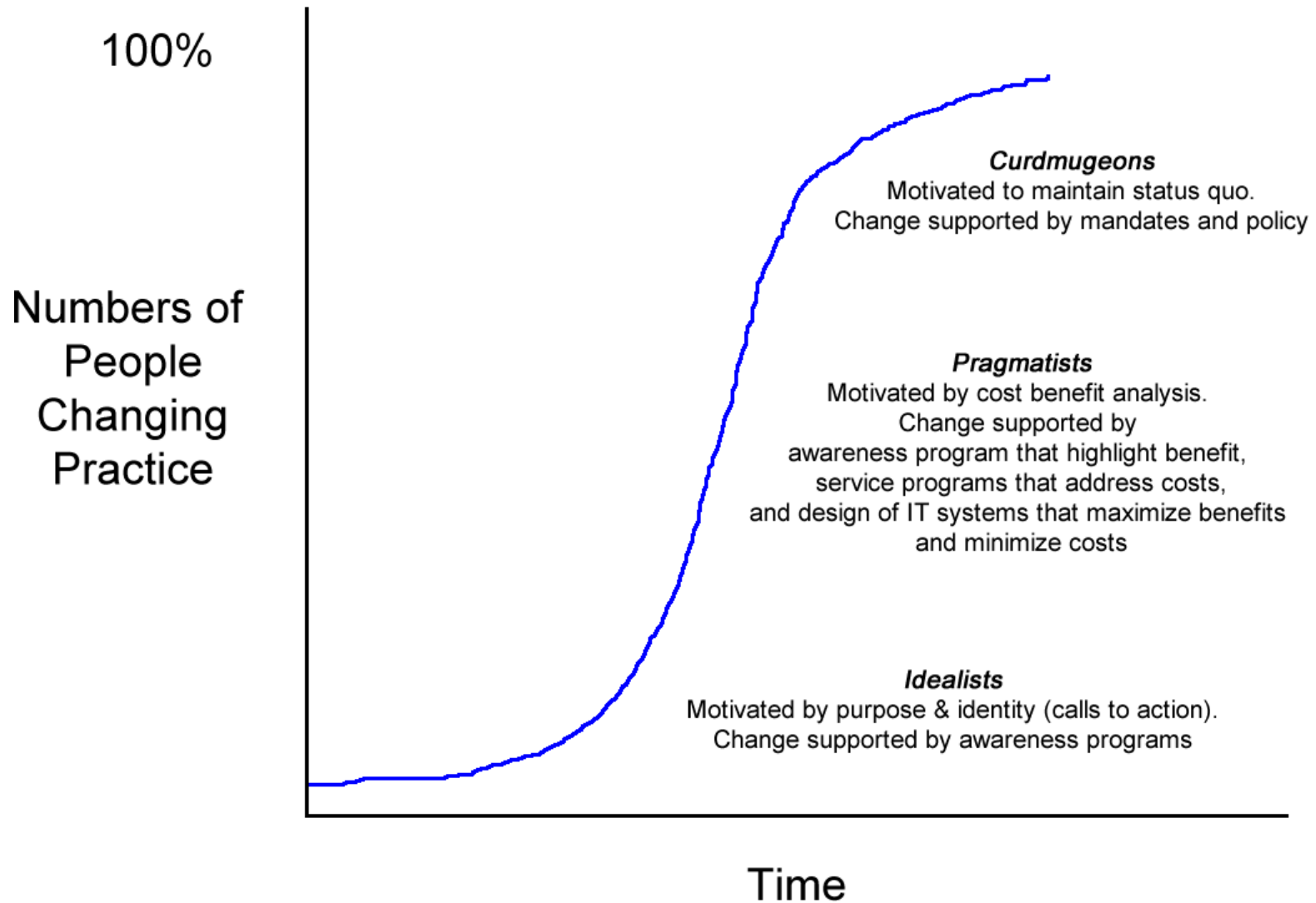
Supporting Open Research

Strategies to Support Research



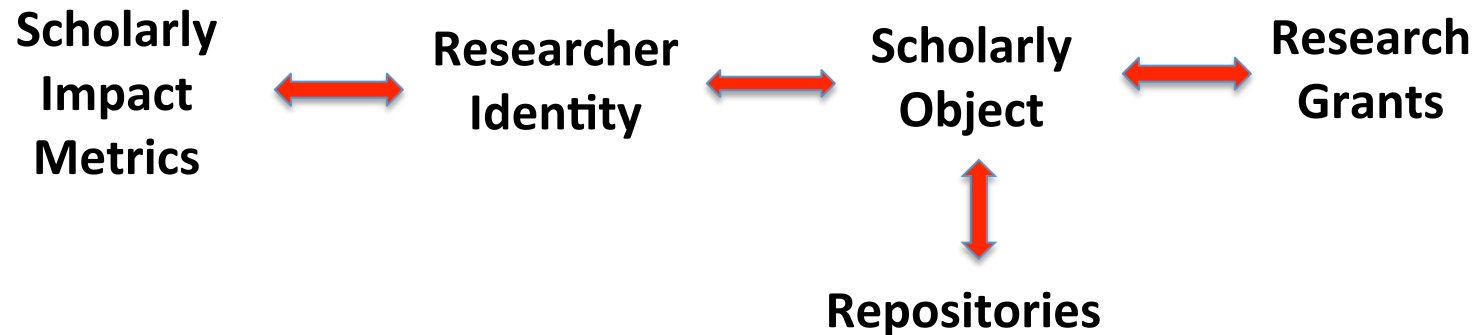
- Access to Research
- Scholarly Identity & Impact
- Data Management & Access

Strategies to Support Research



(Loosely) Coupled Systems

Identity, Collaboration, and Impact



Value Proposition

- Scholarly Identity & Impact
- Societal Impact
- Comply with Federal Mandates
- Business Practices

Access to Research OAKTrust: The Texas A&M Repository

<http://osd133.library.tamu.edu/>

The screenshot shows the DSpace Repository website. At the top, there is a dark red header with the Texas A&M Libraries logo and the text "LIBRARIES TEXAS A&M UNIVERSITY". A "Login" link is in the top right corner. Below the header is a navigation bar with a home icon and "DSpace Home". The main content area is titled "DSpace Repository" and includes a brief description of the service. A section titled "Communities in DSpace" lists various categories with their respective item counts: Colleges & Schools (41729), Faculty Research (1029), Programs, Centers, and Institutes (5456), Special Collections (78), State Agencies (3463), Texas A&M University Libraries (19698), and Texas A&M University Press Consortium (18). A "Recently Added" section features three items, each with a title, a date, and a short description. On the right side, there is a sidebar with a search box, a "BROWSE" section with a highlighted "All of DSpace" button and a list of categories, a "MY ACCOUNT" section with "Login" and "Register" buttons, and a "DISCOVER" section with a highlighted "Author" button and a list of authors with their item counts.

ATM LIBRARIES
TEXAS A&M UNIVERSITY

Login

DSpace Home

DSpace Repository

DSpace is a digital service that collects, preserves, and distributes digital material. Repositories are important tools for preserving an organization's legacy; they facilitate digital preservation and scholarly communication.

Communities in DSpace

Select a community to browse its collections.

- Colleges & Schools** [41729]
Colleges and schools at Texas A&M University (College Station)
- Faculty Research** [1029]
- Programs, Centers, and Institutes** [5456]
- Special Collections** [78]
Special collections in the TAMU repository
- State Agencies** [3463]
- Texas A&M University Libraries** [19698]
- Texas A&M University Press Consortium** [18]

Recently Added

- The Policy Embargoed (still active) Item**
bob, bob (2015-06-23)
- The Policy Embargoed (but it expired) Item**
bob, bob (2015-06-23)
- The Metadata Field Embargoed Item**
bob, bob (2015-06-23)

Uncertainty associated with the gravimetric measurement of particulate matter concentration in ambient air

Lacey, Ronald; Faulkner, William (Journal of the Air and Waste Management Association, 2015)
This work applied a propagation of uncertainty method to typical total suspended particulate (TSP) sampling apparatus in order to estimate the overall measurement uncertainty. The objectives of this study were to estimate ...

An Archaeological Assessment of the Proposed City of Bryan Visitor Center in Brazos County, Texas

Moore, William (2015-06-16)
A "desk top" study of existing literature regarding the site of a proposed visitor center at Block 51 in Bryan, Texas was performed by Brazos Valley Research Associates (BVRA) in September 2001 at the request of the City ...

[View more](#)

Search

BROWSE

- All of DSpace**
- Communities & Collections
- By Issue Date
- Authors
- Titles
- Subjects
- Department

MY ACCOUNT


- Login
- Register

DISCOVER

- Author**
- Unknown (16957)
- Hugh D. Wilson (4733)
- James R. Manhart (3554)
- Robert W. Corbett (868)
- Amanda B. Cemper (444)
- David C. Reed (440)
- Multiple Contributors (348)
- Stripling, Raiford L. (268)
- Raiford Stripling Associates, Inc. (267)
- Monique D. Reed (264)
- ... View More

Subject

Access to Research OAKTrust: Integrated Metrics

Login


[DSpace Home](#) / [Faculty Research](#) / [Faculty Publications](#) / [View Item](#)

Annual Report for the OAK Fund, Academic Year 2013-2014

No Thumbnail

Annual report (year 1) for the OAK Fund, the funding to support publication fees for open access articles written by Texas A&M faculty.

URI
<http://hdl.handle.net/1969.1/153711>

View/Open
 [Oak Fund Annual Report \(1.943Mb\)](#)

Subject
OAK Fund, open access publication fee funding

Date
2015-02-17

Department
University Libraries

Author
Herbert, Bruce E.


Collections
Faculty Publications [1029]


Metadata
[Show full item record](#)


Citation
Herbert, Bruce E. (2015). Annual Report for the OAK Fund, Academic Year 2013-2014. Available electronically from <http://hdl.handle.net/1969.1/153711>.

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| | |
|--|--|
|  <p>Usage DSpace - Downloads: 11 DSpace - Abstract Views: 11</p> | <p>Social Media Facebook - Shares: 1 Facebook - Likes: 1 Twitter - repository.tamu.edu: 1</p> |
|--|--|

 [PLUMX - see details](#)



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Search 

Search DSpace
 This Collection

BROWSE

All of DSpace

- [Communities & Collections](#)
- [By Issue Date](#)
- [Authors](#)
- [Titles](#)
- [Subjects](#)
- [Department](#)

This Collection

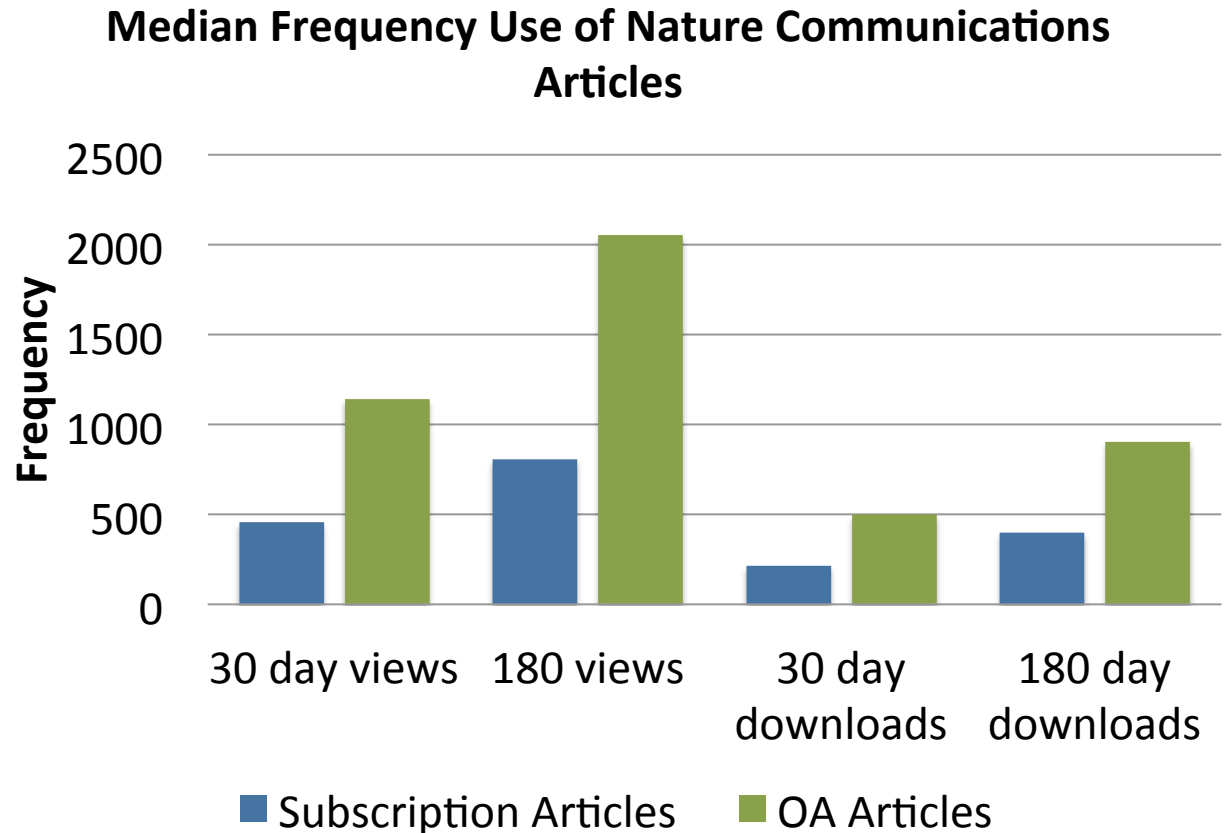
- [By Issue Date](#)
- [Authors](#)
- [Titles](#)
- [Subjects](#)
- [Department](#)

MY ACCOUNT

- [Login](#)
- [Register](#)

Impact of Open Access on Citation Rates

The Research Information Network, a British research center, recently analyzed the distribution and impact of articles published in hybrid science journal *Nature Communications*.



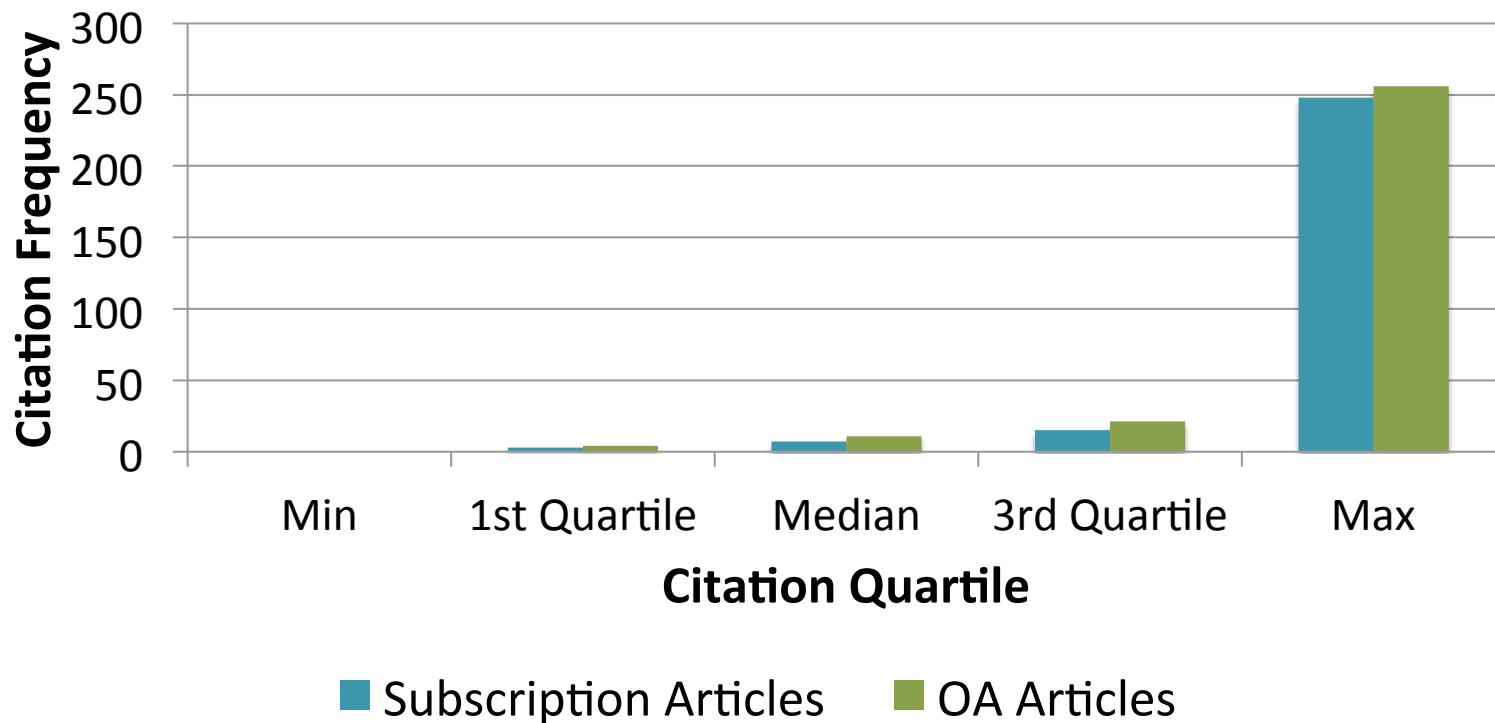
The report: http://www.nature.com/press_releases/ncommsreport2014.pdf



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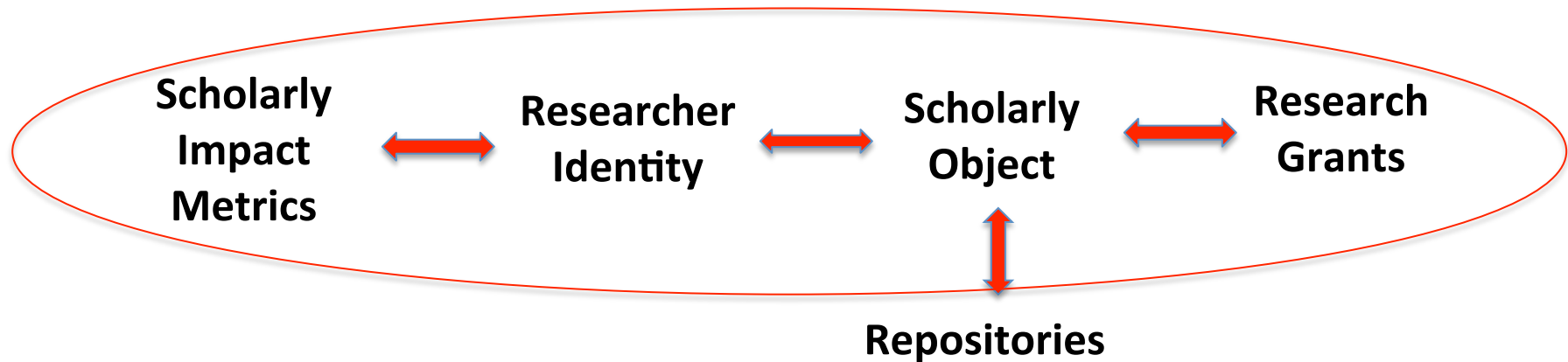
Citation Frequency For All Articles Published in Nature Communications



The report: http://www.nature.com/press_releases/ncommsreport2014.pdf



Scholarly Identity & Impact



Value Proposition

- Disambiguation
- Discoverability
- Business Practices



Scholarly Identity & Impact

VIVO, PlumX, and ORCID

<http://vivo.tamu.edu/>

The screenshot shows the VIVO website interface. At the top, there is a navigation bar with the VIVO logo (connect • share • discover), the TAMU LIBRARIES logo (TEXAS A&M UNIVERSITY), and links for Index and Log in. A search bar is located in the top right corner. Below the navigation bar, there is a main menu with links for Home, Organizations, People, Research, and About. The main content area features a 'Welcome To VIVO' section with a brief description of the tool and a search box labeled 'Search VIVO'. Below this, there are three columns: 'Research' showing 32,312 Academic Articles with a 'View all ...' link; 'Faculty' listing Hudson, Valerie M., Bell-Pedersen, Deborah, Lineberger, R D., and Anders, Katherine C. with a 'View all ...' link; and 'Departments' listing History, Atmospheric Sciences, Ecosystem Science and Management, Aerospace Engineering, Management, and Veterinary Physiology and Pharmacology with a 'View all ...' link. At the bottom, a 'Statistics' section displays four metrics: 3.6k People, 107 Organization, 37k Research, and 316 Locations.

Scholarly Identity & Impact

VIVO, PlumX, and ORCID

Artifact Summary

| | | | | |
|---------|-------|--------|------|-------|
| 36131 | 29036 | 23174 | 7287 | 6111 |
| Article | Image | Thesis | Book | Other |

Researchers: Showing 50 of 3342

Narrow by: Showing 10 of 18

- Associate Provost - Dean of Faculties
- Bush School of Government and Public Service
- College of Agriculture and Life Sciences
- College of Architecture
- College of Education and Human Development
- College of Geosciences
- College of Liberal Arts
- College of Science
- College of Veterinary Medicine and Biomedical Sciences
- DSpace

Impact by Type: All

| Type | Captures | Citations | Social Media | Mentions | Usage |
|---------|----------|-----------|--------------|----------|-------|
| Article | 19 | 8 | 24 | 14 | 104 |

| Year | Title | Type | Captures | Citations | Social Media | Mentions | Usage |
|------|--|---------|----------|-----------|--------------|----------|-------|
| 2103 | Assessing corrosion of uns s30403 stainless steel for applications in nuclear waste reprocessing systems | Article | | | | | |
| 2015 | Protein for exercise and recovery. | Article | 19 | 8 | 24 | 14 | 104 |

<https://plu.mx/tamu/g/>

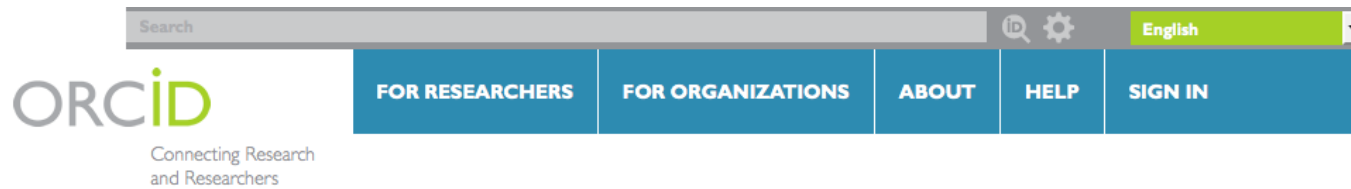
Scholarly Identity on the Internet



The research community has lacked the ability to link researchers and scholars with their professional activities.

- Name ambiguity
- Discoverability within and across databases
- Author, grantee, and faculty record management
- Output tracking
- Research reporting and impact assessment

Scholarly Identity & Impact VIVO, PlumX, and ORCID



DISTINGUISH YOURSELF IN THREE EASY STEPS

ORCID provides a persistent digital identifier that distinguishes you from every other researcher and, through integration in key research workflows such as manuscript and grant submission, supports automated linkages between you and your professional activities ensuring that your work is recognized. [Find out more.](#)

- 1
REGISTER Get your unique ORCID identifier [Register now!](#)
 Registration takes 30 seconds.
- 2
ADD YOUR INFO Enhance your ORCID record with your professional information and link to your other identifiers (such as Scopus or ResearcherID or LinkedIn).
- 3
USE YOUR ORCID ID Include your ORCID identifier on your Webpage, when you submit publications, apply for grants, and in any research workflow to ensure you get credit for your work.

<http://orcid.org/>

Emerging Issue: Identity & Reputation ORCID*s* in the Publication Process

The screenshot shows the top navigation bar of the Nature journal website. The header includes the 'nature' logo and the tagline 'International weekly journal of science'. Below the logo is a navigation menu with links for Home, News & Comment, Research, Careers & Jobs, Current Issue, Archive, and Audio & Video. A secondary navigation bar shows 'Archive', 'Volume 493', 'Issue 7430', 'Editorial', and 'Article'. Below this, the text 'NATURE | EDITORIAL' is displayed, followed by the article title 'In search of credit' and a sub-headline: 'Explicit recognition of researchers' contributions to science is becoming more comprehensive. Not before time — especially as a means of crediting referees.' The date '02 January 2013' is also visible.

*“Nature journals authors can link their ORCID to their account in our manuscript submission and tracking system, and we[are now] publishing authors’ ORCID*s* in papers.”*

ORCID IDs are being received by
CrossRef and PubMed

This screenshot shows an article preview page from Nature Immunology. The article title is 'The sig... T cell c... inflamm...'. The author listed is 'Chen Dong', with affiliations including 'Department of Immunology and Center for Inflammation and Cancer, MD Anderson Cancer Center, Houston, Texas, USA.' and 'Tsinghua University School of Medicine, Beijing, China.' A red circle highlights the ORCID ID 'orcid.org/0000-0002-0084-9130' in the author's information box. Other elements include a search bar, navigation links like 'Journal home', 'Current issue', and 'For authors', and a sidebar with 'Lecturer / Senior Lecturer Molecular Biology / Cell Biology University of Southampton'.

Diehl LA, Souza RM, Alves JB, Gordan PA, Esteves RZ, Jorge ML, Coelho IC. InsuOnline, a Serious Game to Teach Insulin Therapy to Primary Care Physicians: Design of the Game and a Randomized Controlled Trial for Educational Validation. JMIR Res Protoc. 2013 Jan 21;2(1):e5. doi: 10.2196/resprot.2431. PubMed PMID: 23612462, AUID- ORCID: 0000-0002-9958-7213

ORCID iDs in the Grant Application Process

The U.S. National Institutes of Health (NIH) SciENcv includes ORCID iDs

ORCID
Connecting Research and Researchers

SIGN IN
Email or iD:
Password:
Sign in
[Forgotten Password?](#)

DON'T HAVE AN ID? REGISTER
First name:
Last name:
Email:
Re-enter email:
Password:
Confirm password:
Default privacy for new works

ORCID
CONNEC
SciENCv
WITH YC
SciENCv
has asked for the
Read limited info
This application w
other private info
Deny **Ag**

Edit Personal Information

Required Information

First Name:
Last Name:
Address 1:
[add another address line](#)
City:
State: Country:
Postal/zip code:
Email:

Optional Information

ORCID:

Save **Cancel**

Link grant application to ORCID identifier

Import information from ORCID record

Data's shameful neglect

Research cannot flourish if data are not preserved and made accessible. All concerned must act accordingly.

More and more often these days, a research project's success is measured not just by the publications it produces, but also by the data it makes available to the wider community. Pioneering archives such as GenBank have demonstrated just how powerful such legacy data sets can be for generating new discoveries — especially when data are combined from many laboratories and analysed in ways that the original researchers could not have anticipated.

All but a handful of disciplines still lack the technical, institutional and cultural frameworks required to support such open data access (see pages 168 and 171) — leading to a scandalous shortfall in the sharing of data by researchers (see page 160). This deficiency urgently needs to be addressed by funders, universities and the researchers themselves.

Research funding agencies need to recognize that preservation of and access to digital data are central to their mission, and need to be supported accordingly. Organizations in the United Kingdom, for instance, have made a good start. The Joint Information Systems Committee, established by the seven UK research councils in 1993, has made data-sharing a priority, and has helped to establish a Digital Curation Centre, headquartered at the University of Edinburgh, to be a national focus for research and development into data issues. Other European agencies have also pursued initiatives.

The United States, by contrast, is playing catch-up. Since 2005, a 29-member Interagency Working Group on Digital Data has been trying to get US funding agencies to develop plans for how they will support data archiving — and just as importantly, to develop policies on what data should and should not be preserved, and what exceptions should be made for reasons such as patient privacy. Some agencies have taken the lead in doing so; many more are hanging back. They should all be moving forwards vigorously.

What is more, funding agencies and researchers alike must ensure that they support not only the hardware needed to store the data, but

also the software that will help investigators to do this. One important facet is metadata management software: tools that streamline the tedious process of annotating data with a description of what the bits mean, which instrument collected them, which algorithms have been used to process them and so on — information that is essential if other scientists are to reuse the data effectively.

Also necessary, especially in an era when data can be mixed and combined in unanticipated ways, is software that can keep track of which pieces of data came from whom. Such systems are essential if tenure and promotion committees are ever to give credit — as they should — to candidates' track-record of data contribution.

Who should host these data? Agencies and the research community together need to create the digital equivalent of libraries: institutions that can take responsibility for preserving digital data and making them accessible over the long term. The university research libraries themselves are obvious candidates to assume this role. But whoever takes it on, data preservation will require robust, long-term funding. One potentially helpful initiative is the US National Science Foundation's DataNet programme, in which researchers are exploring financial mechanisms such as subscription services and membership fees.

Finally, universities and individual disciplines need to undertake a vigorous programme of education and outreach about data. Consider, for example, that most university science students get a reasonably good grounding in statistics. But their studies rarely include anything about information management — a discipline that encompasses the entire life cycle of data, from how they are acquired and stored to how they are organized, retrieved and maintained over time. That needs to change: data management should be woven into every course in science, as one of the foundations of knowledge. ■

"Data management should be woven into every course in science."

A step too far?

The Obama administration must fund human space flight adequately, or stop speaking of 'exploration'.

After the space shuttle *Columbia* burned up during re-entry into Earth's atmosphere in 2003, the board that was convened to investigate the disaster looked beyond its technical causes to NASA's organizational malaise. For decades, the board pointed out, the shuttle programme had been trying to do too much with too little money. NASA desperately needed a clearer vision and a better-defined mission for human space flight.

The next year, then-President George W. Bush attempted to supply that vision with a new long-term goal: first send astronauts to build

a base on the Moon, then send them to Mars. This idea immediately set off a debate that is still continuing, in which sceptics ask whether there is any point in returning to the Moon nearly half a century after the first landings. Why not go to Mars directly, or visit near-Earth asteroids, or send people to service telescopes in the deep space beyond Earth?

Yet that debate is both counter-productive — a new set of rockets could go to all of these places — and moot, because Bush's vision never attracted the hoped-for budget increases. Indeed, a blue-riband commission reporting to US President Barack Obama this week (see page 153) finds the organizational malaise unchanged: NASA is still doing too much with too little. Without more money, the agency won't be sending people anywhere beyond the International Space Station, which resides in low Earth orbit only 350 kilometres up. And even the ability to do that is in question: Ares I, the US rocket that would return

Challenges Remain


- Data Management
- Federal Mandates

Public Access to Data Data Repository



<https://www.tdl.org/>

The screenshot shows the Texas Digital Library website. At the top left is the logo with a star and the text "Texas Digital Library". To the right is a search bar with the text "search here ..." and a "Go" button. Below the logo is a navigation menu with links: HOME (underlined), SERVICES, ABOUT, TRAINING, SUPPORT, MEMBERS, and NEWS. The main banner features the text "SUPPORT FOR THE Riches of Texas Academic Institutions" with "Riches" in blue. To the right of the text is a grid of circular icons, some containing symbols like a folder, a magnifying glass, and a star. Below the banner is a dark bar with the text "Learn more about our services." and three dots. The main content area is divided into three columns. The left column is titled "Our Mission" and contains a paragraph about the consortium, a "Learn more:" section with links to "TDL Monthly Forum", "TDL Members", "Working Groups and Committees", and "Our Member Stories", and a "Our Member Stories" section with a "gospel" logo. The middle column is titled "Latest News" and contains two news items: "TDL welcomes new member Sam Houston State University" dated MAY 12, 2015, and "Vireo 3 webinar recording is now available" dated MARCH 19, 2015. The right column is titled "Support" and contains links for "Help", "Training", and "Member Resources", a "Keep in Touch" section with social media icons for Facebook, RSS, and Twitter, and a "Partners" section with buttons for "Funding", "Strategic", and "Technology". At the bottom of the page is a footer with links for "Contact", "Policies", "State of Texas", and "Web Accessibility Policy".





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Ontogeny in the tube-crested dinosaur *Parasaurolophus* (Hadrosauridae) and heterochrony in hadrosaurids


[Andrew A. Farke](#)¹, [Derek J. Chok](#)², [Annisa Herrero](#)², [Brandon Scolieri](#)², [Sarah Werning](#)³

Published October 22, 2013
PubMed [24167777](#)

 Part of the PeerJ PeerJ Picks 2014 Collection

 Part of the PeerJ Top Paleontology Papers - October 2014

July 1, 2014: **(Minor Correction):** "FMNH" was inadvertently omitted from the list of institutional abbreviations. The abbreviation list should include: FMNH, Field Museum of Natural History, Chicago, Illinois, USA.

 Also see the associated PeerJ guest blog post by author Andrew Farke on this paper as well as the "Dinosaur Joe" website built specifically for this new find.

➤ Author and article information

<https://peerj.com/articles/182/#supplemental-information>



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Segmentation data for braincase of Parasaurolophus sp. (Hadrosauridae: Dinosauria)

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 - braincase-bone-label.nrrd
 - braincase-connective_tissue-label.nrrd
 - braincase-label.nrrd
 - braincase-mass-label.nrrd
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RESEARCH ARTICLE

Sharing Detailed Research Data Is Associated with Increased Citation Rate

Heather A. Piwowar , Roger S. Day, Douglas B. Fridsma

Published: March 21, 2007 • DOI: 10.1371/journal.pone.0000308 • Featured in PLOS Collections

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Abstract

Background

Sharing research data provides benefit to the general scientific community, but the benefit is less obvious for the investigator who makes his or her data available.

Principal Findings

We examined the citation history of 85 cancer microarray clinical trial publications with respect to the availability of their data. The 48% of trials with publicly available microarray data received 85% of the aggregate citations. Publicly available data was significantly ($p = 0.006$) associated with a 69% increase in citations, independently of journal impact factor, date of publication, and author country of origin using linear regression.

Significance

This correlation between publicly available data and increased literature impact may further motivate investigators to share their detailed research data.

Figures



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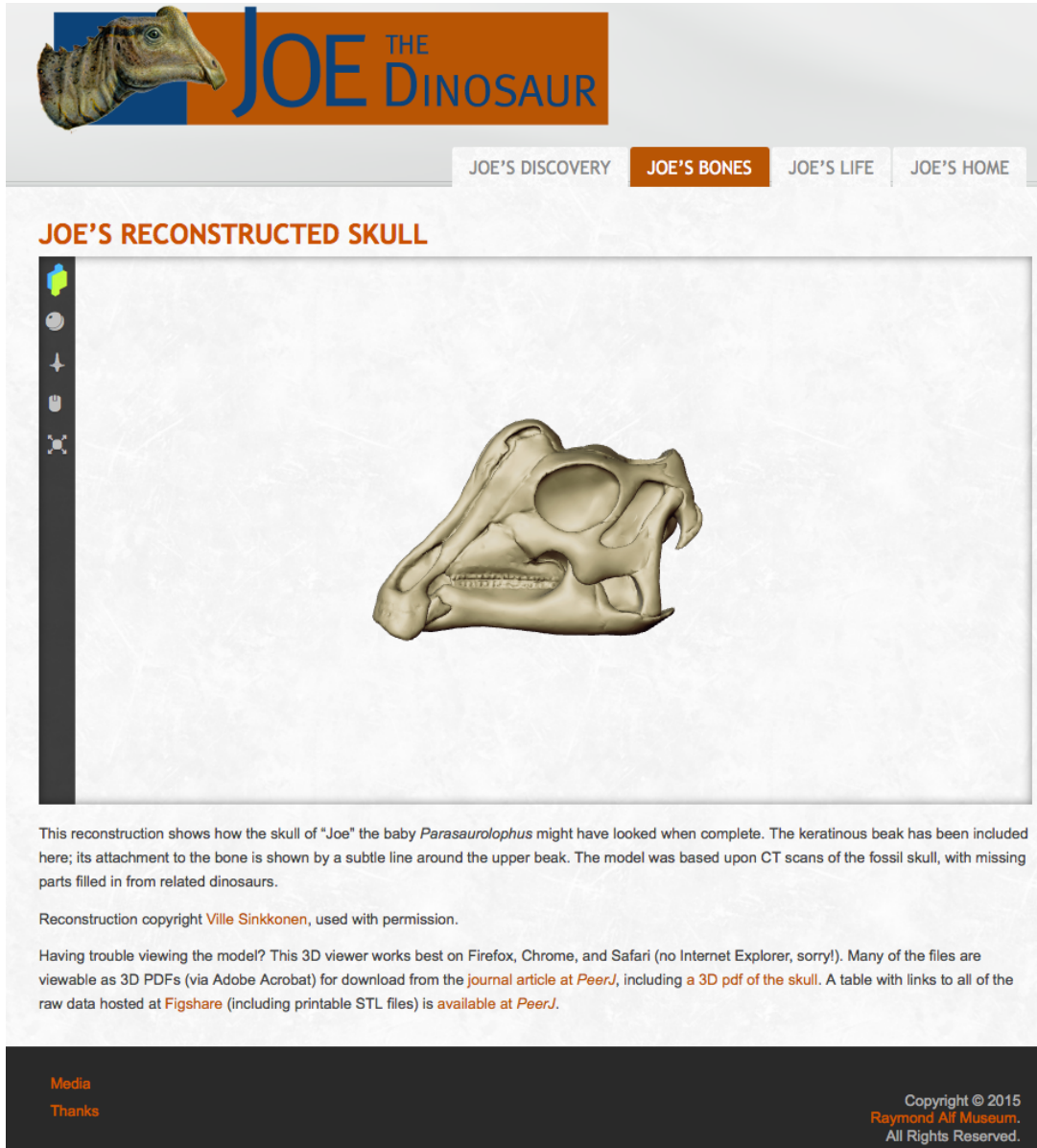
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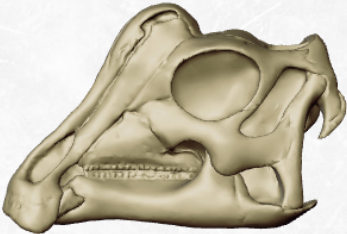


The screenshot shows the website header with a dinosaur head logo and the text 'JOE THE DINOSAUR'. Below the header are navigation tabs: 'JOE'S DISCOVERY', 'JOE'S BONES' (highlighted), 'JOE'S LIFE', and 'JOE'S HOME'. The main content area is titled 'JOE'S RECONSTRUCTED SKULL' and features a 3D model of a dinosaur skull in a side profile view. The skull is light brown and shows the eye socket, jaw, and a small beak. A vertical toolbar on the left side of the 3D viewer includes icons for home, zoom in, zoom out, and full screen. Below the 3D viewer, there is a paragraph of text explaining the reconstruction, a copyright notice, and a troubleshooting tip. At the bottom of the page, there are links for 'Media' and 'Thanks', and a copyright notice for the Raymond Alf Museum.

JOE THE DINOSAUR

JOE'S DISCOVERY | **JOE'S BONES** | JOE'S LIFE | JOE'S HOME

JOE'S RECONSTRUCTED SKULL



This reconstruction shows how the skull of "Joe" the baby *Parasaurolophus* might have looked when complete. The keratinous beak has been included here; its attachment to the bone is shown by a subtle line around the upper beak. The model was based upon CT scans of the fossil skull, with missing parts filled in from related dinosaurs.

Reconstruction copyright Ville Sinkkonen, used with permission.

Having trouble viewing the model? This 3D viewer works best on Firefox, Chrome, and Safari (no Internet Explorer, sorry!). Many of the files are viewable as 3D PDFs (via Adobe Acrobat) for download from the [journal article at PeerJ](#), including a [3D pdf of the skull](#). A table with links to all of the raw data hosted at [Figshare](#) (including printable STL files) is [available at PeerJ](#).

Media
Thanks

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Open Data

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<http://dinosaurjoe.org/joes-bones/digital-joe/joes-skull-reconstruction/>

Societal Impacts of Open Access

Roscoe Collegiate High School

- Roscoe Collegiate became the first rural Early College in Texas in 2009 – a college readiness program
- Roscoe Collegiate Model Goals
 - Each student to complete the Associate Degree as an indicator of college readiness,
 - Students earn a STEM field endorsement as an indicator of workforce readiness.



<http://www.wtc.edu/students/distancelearning/roscoecollegiate.html>

Roscoe Collegiate Capstone STEM Research Experience

- As alternatives to standardize testing, students engage in authentic research projects
 - Student-led questioning, data collection and analysis, poster development & presentation
 - All students in grades 3-11 conduct 4H-based (agricultural) research projects
 - Grade 12 year-long, career path relevant capstone research project.
- Bond approval to construct STEM Research Center

Open Access to Knowledge Search (OAKSearch)

- “It was very helpful to me as I used it for writing some curriculum material.
- Another teacher I know used it for her work on her masters degree.
- We used it in our college readiness program to teach students the differences between lower level sources and academic sources.
- Lastly, our STEM research class students used it to find sources!”

What are Open Access Library Resources?

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There is a growing movement, called open access (OA), where scholarly publications are digital, online, free-of-charge, and free of most copyright and licensing restrictions. This movement allows the Texas A&M Libraries to provide everyone, including K12 students, former students of Texas A&M, and the citizens of Texas, with access to quality publications, reports, and books.

Open Access Collections

This search portal is drawing from a number of open access collections, including those listed below. If you are a TAMU student or faculty member, please use [the library's main search engine](#) that searches our entire collection.

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- arXiv
- DataCite
- Directory of Open Access Journals
- HathiTrust
- Project Gutenberg
- Public Library of Science (PLoS)
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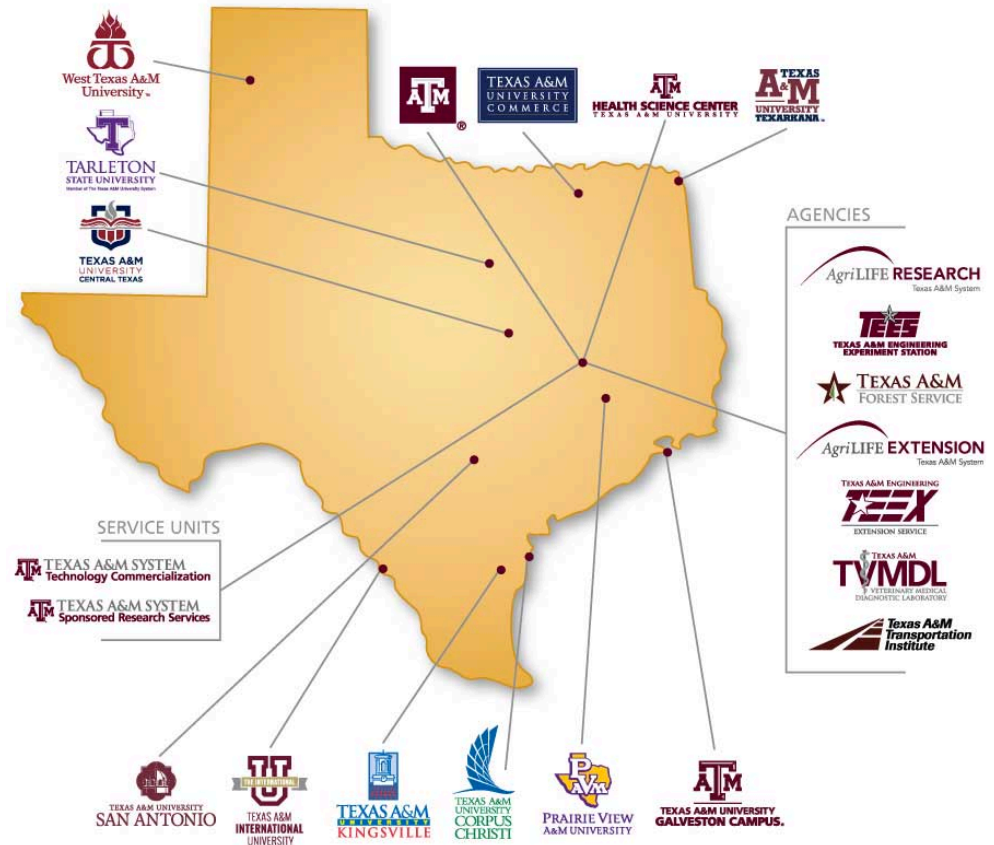
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Next Steps

Implementation & Scaling

- ❑ Populate the systems with information
- ❑ Stakeholder buy-in
- ❑ Professional development
- ❑ Scale the projects



Dr. Bruce Herbert
beherbert@library.tamu.edu

Citation

Herbert, B.E. 2015. Identity, Collaboration, and Impact: Enhancing Research With Open, Integrated Digital Systems. Chancellor's Summit on Academic Technology. College Station, TX. June 25-26, 2015.