

From Information Stewardship to Data Science Fluency - The changing expectations of Research Information Citizens.

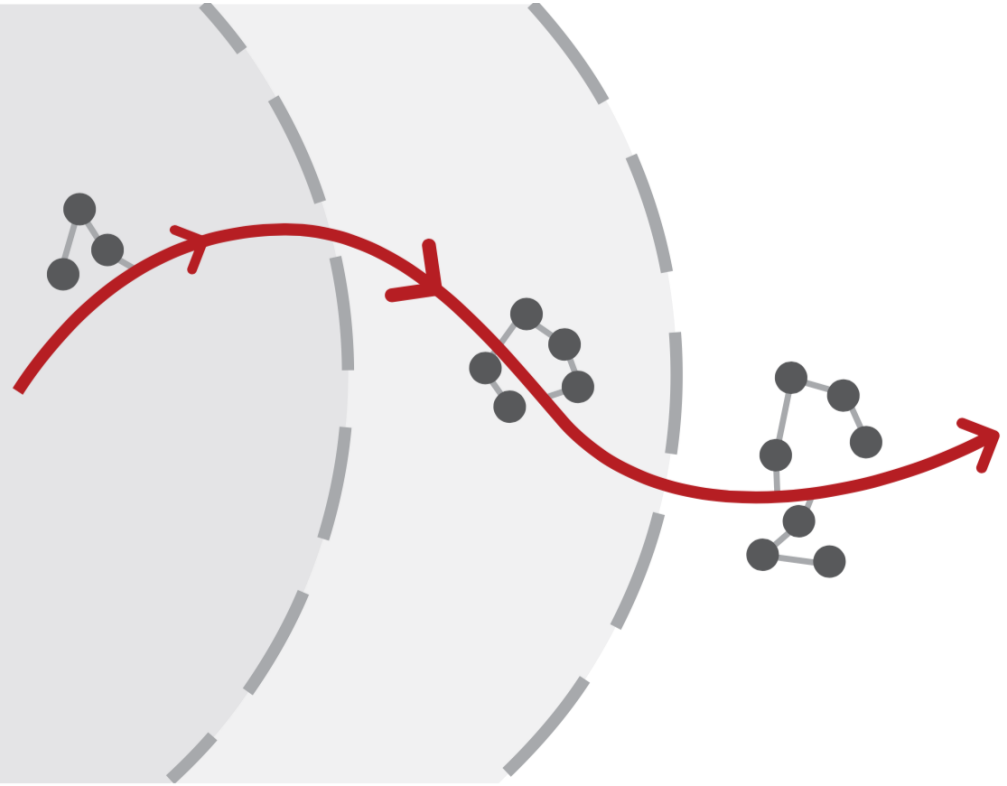
Simon Porter
Director Digital Science
Digital Science
@sjcporter

Consider the structure of a publication



Consider how it travels, influencing the world around it

- Connecting people to ideas through its discovery
- Creating research identity through aggregation
- Enabling assessment, and supporting strategic decisions around research investment



All the time gathering further context and value

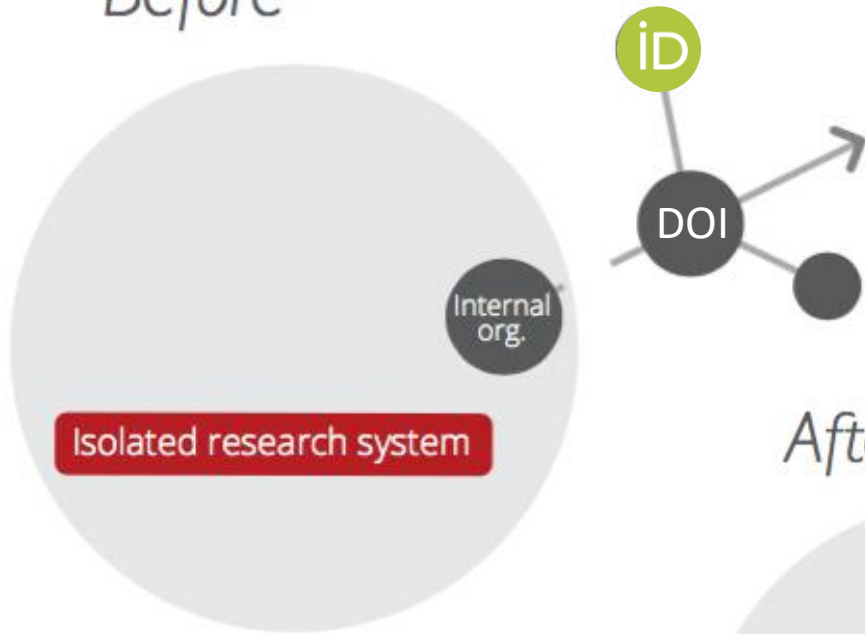
The Laws of Research Data Mechanics

3rd Law of Research Data Mechanics

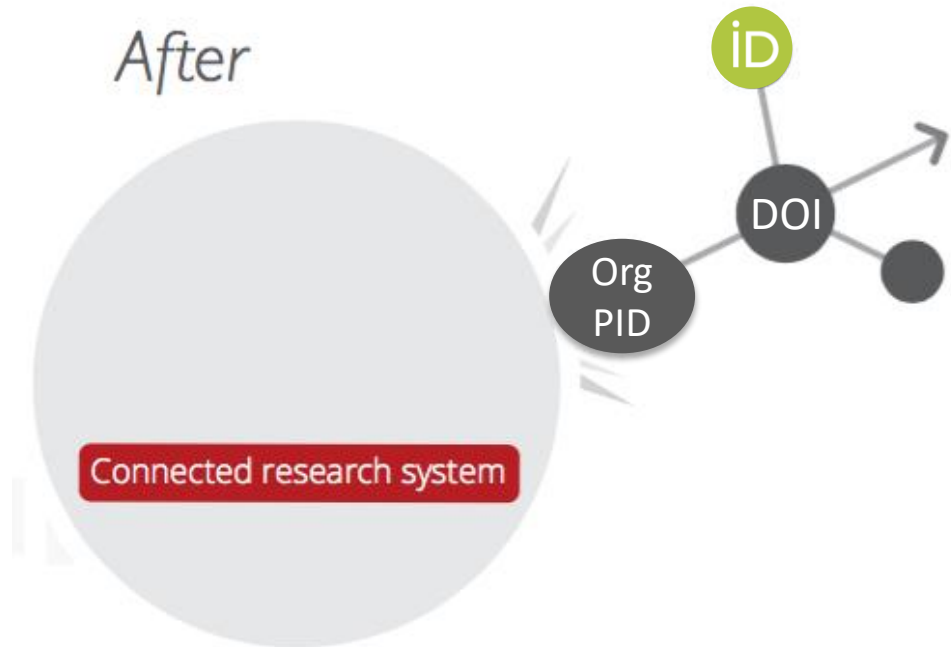
Research particles can only exist in an
openly available shared context

(lets call it PID's Law)

Before

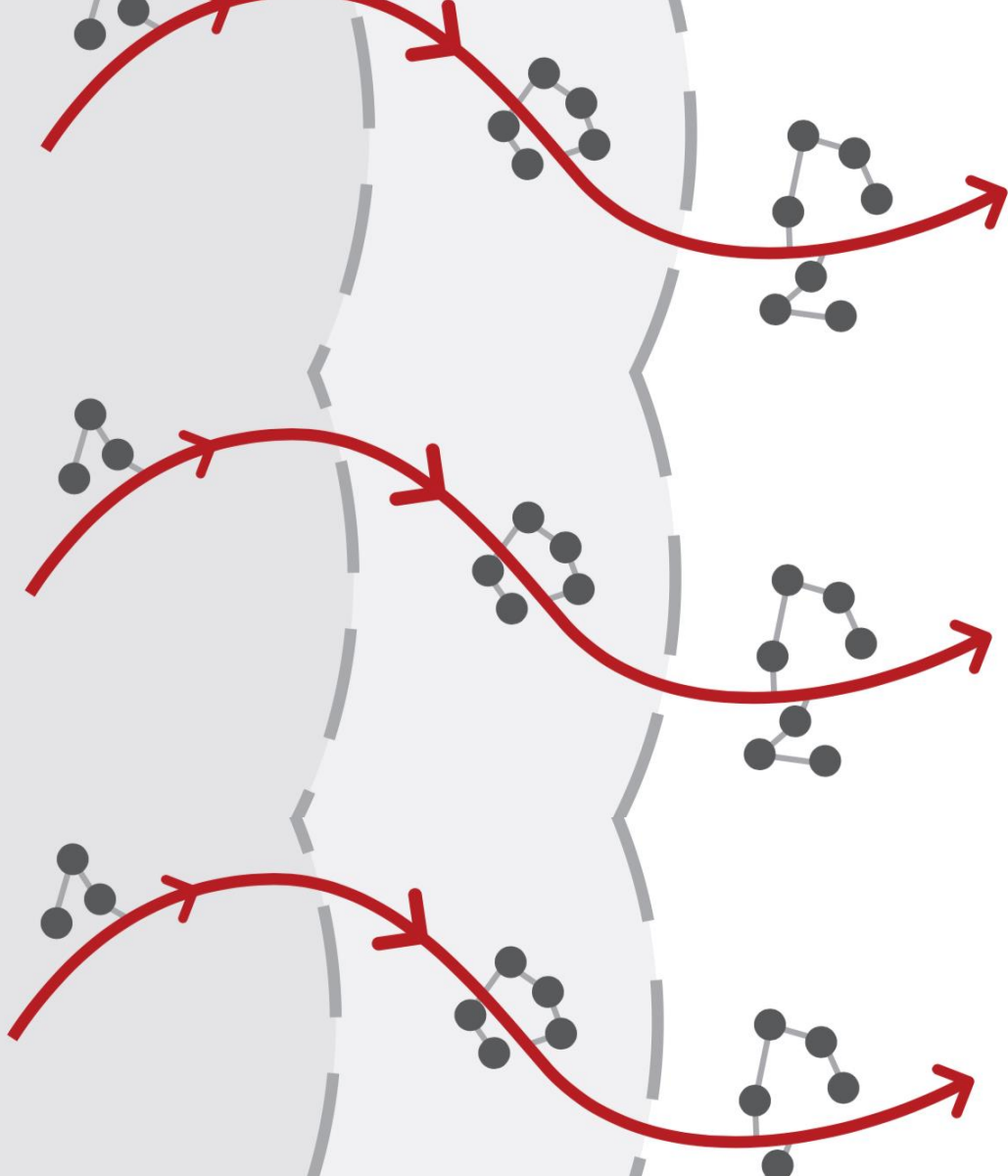


After



2nd Law of Research Data Mechanics

Research Information has maximum utility to the sector when its progress through the system encounters minimal latency



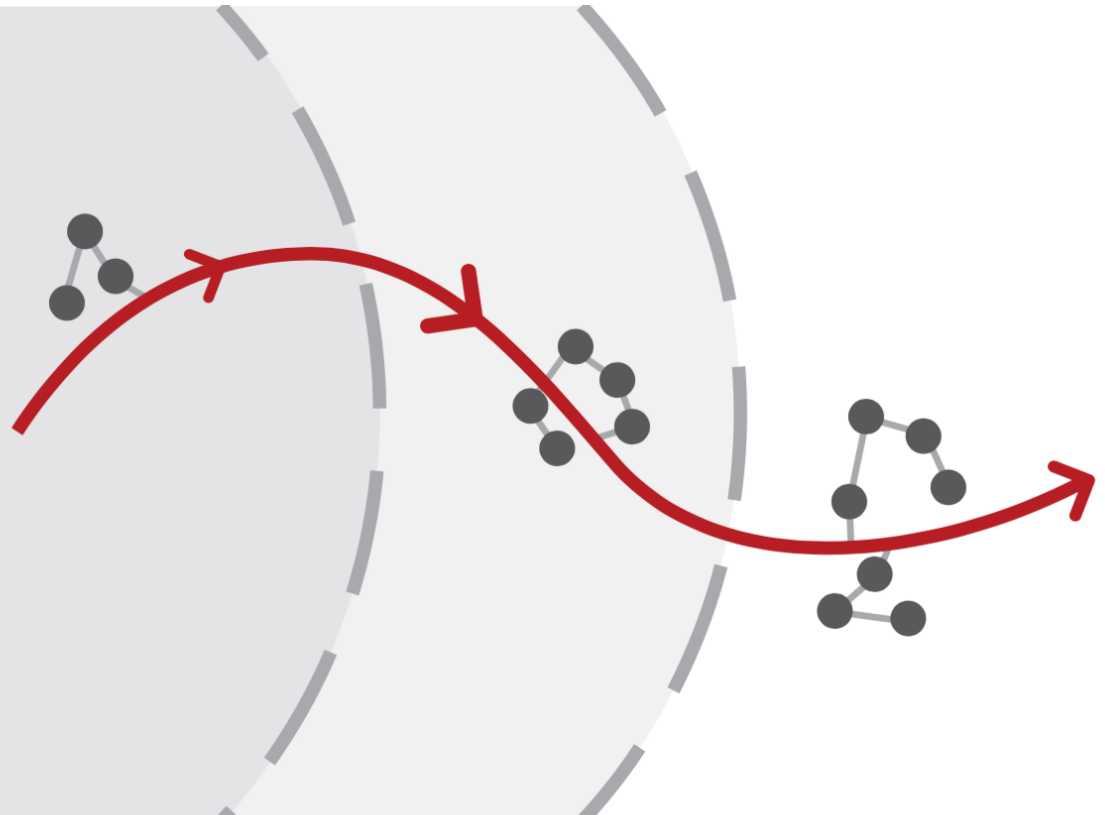
We need to make a change from periodic reporting to harnessing a flow of research molecules*

*such as publications, grants, datasets, patents....

Research Data Mechanics...



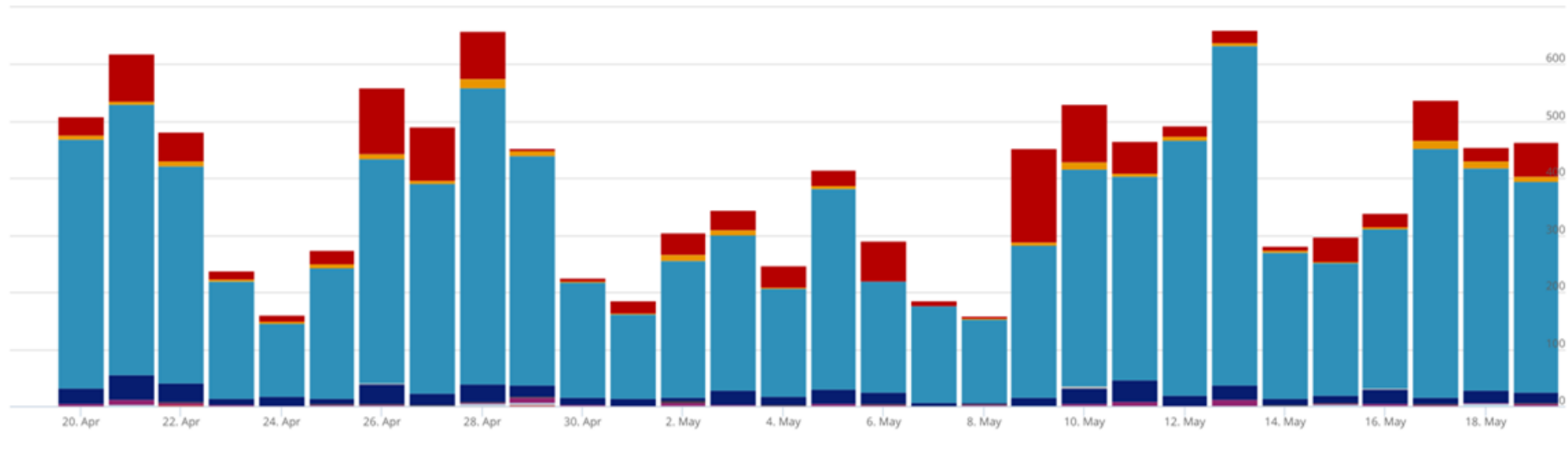
In learning how to integrate, institutions are gaining new capabilities



In the connecting we get new data



ZOOM 1 week 1 month 3 months 6 months 1 year All time



New perspectives

Policy: Twenty tips for interpreting scientific claims

Overview of attention for article published in Nature, November 2013



About this Attention Score

In the top 5% of all research outputs scored by Altmetric

Among the highest-scoring outputs from this source (#11 of 41,466)

High Attention Score compared to outputs of the same age (99th percentile)

High Attention Score compared to outputs of the same age and source (99th percentile)

[LESS...](#)

Mentioned by

SUMMARY

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UNIVERSITY OF
CAMBRIDGE

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Home - Professor Mark Burgman

Professor Mark Burgman

Adrienne Clarke Chair of Botany and Managing
Director, Australian Centre of Excellence for Risk
Analysis at University of Melbourne



Adrienne Clarke Chair of Botany and Managing Director, Australian Centre of Excellence for Risk
Analysis, University of Melbourne

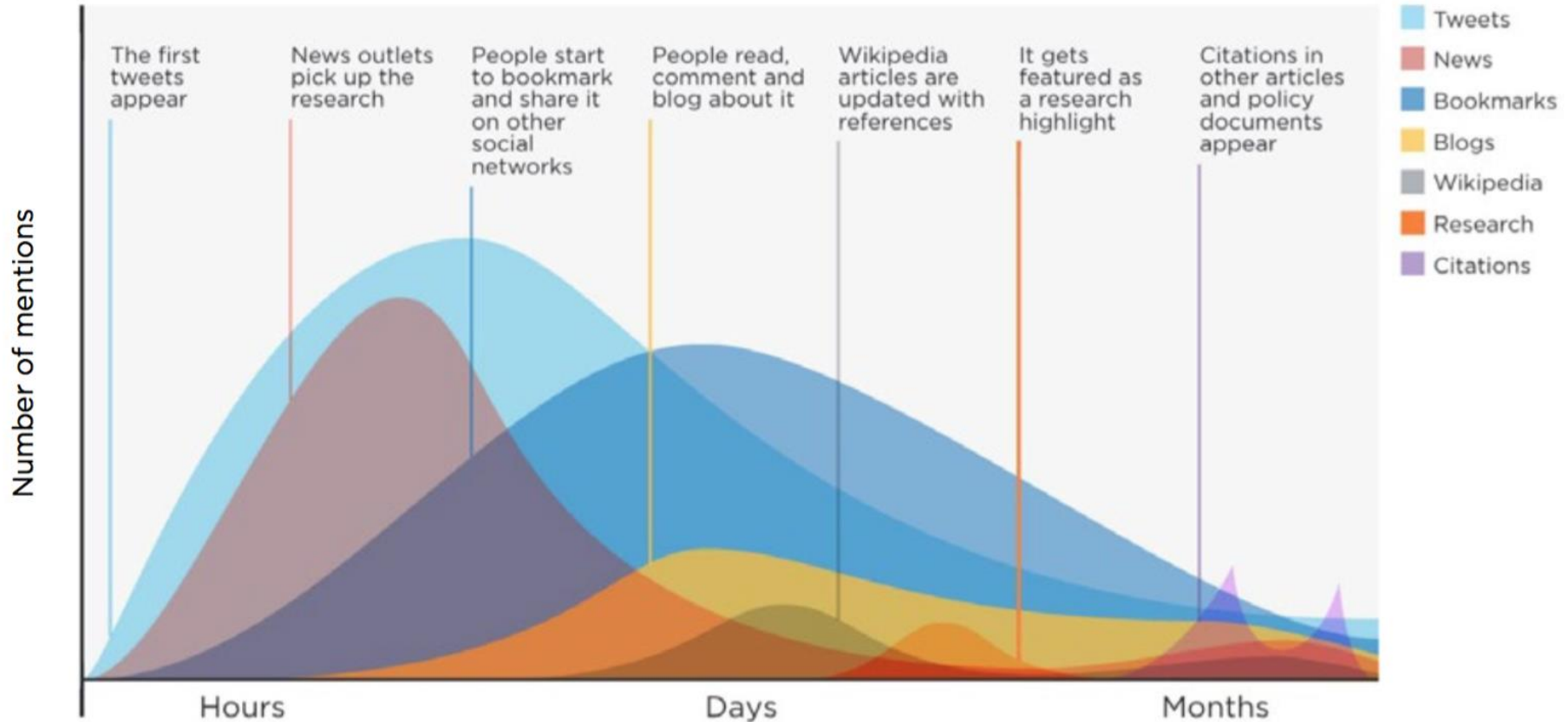
Share



For Mark's tips to policy makers on interpreting scientific claims, see his paper published in Nature in November 2013 [here](#).

And new imperatives for real time reporting

A typical timeline of attention





Published

Funded

Publication

Classified

Referencing and referenced by

Authors

Organizations

Publisher Responsibilities

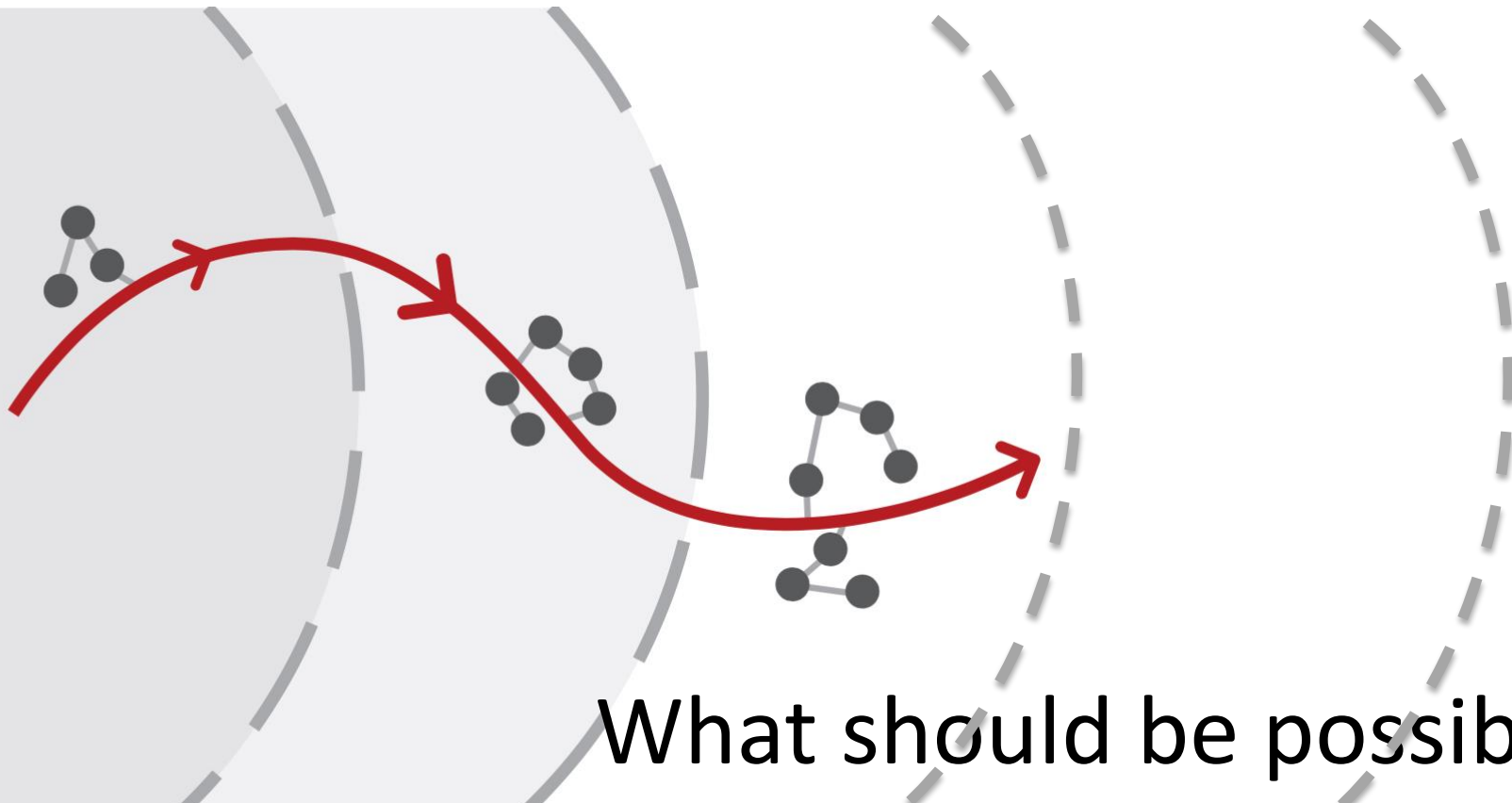
Requiring ORCID in Publication Workflows: Open Letter

Major publishers have committed to requiring ORCID iDs in the publishing process for their journals and invite other publishers to do the same.

In November, 2015, a group of publishers asked ORCID to help facilitate communications about their plans to require authors to use an ORCID iD, including hosting this open letter explaining their rationale, developing best practices for using iDs in publishing, and maintaining the signatory list. The publishers' goal is to encourage others to join them in supporting the adoption of ORCID. Publishers signing this open letter are committing to requiring ORCID iDs during 2016 following specific implementation standards.

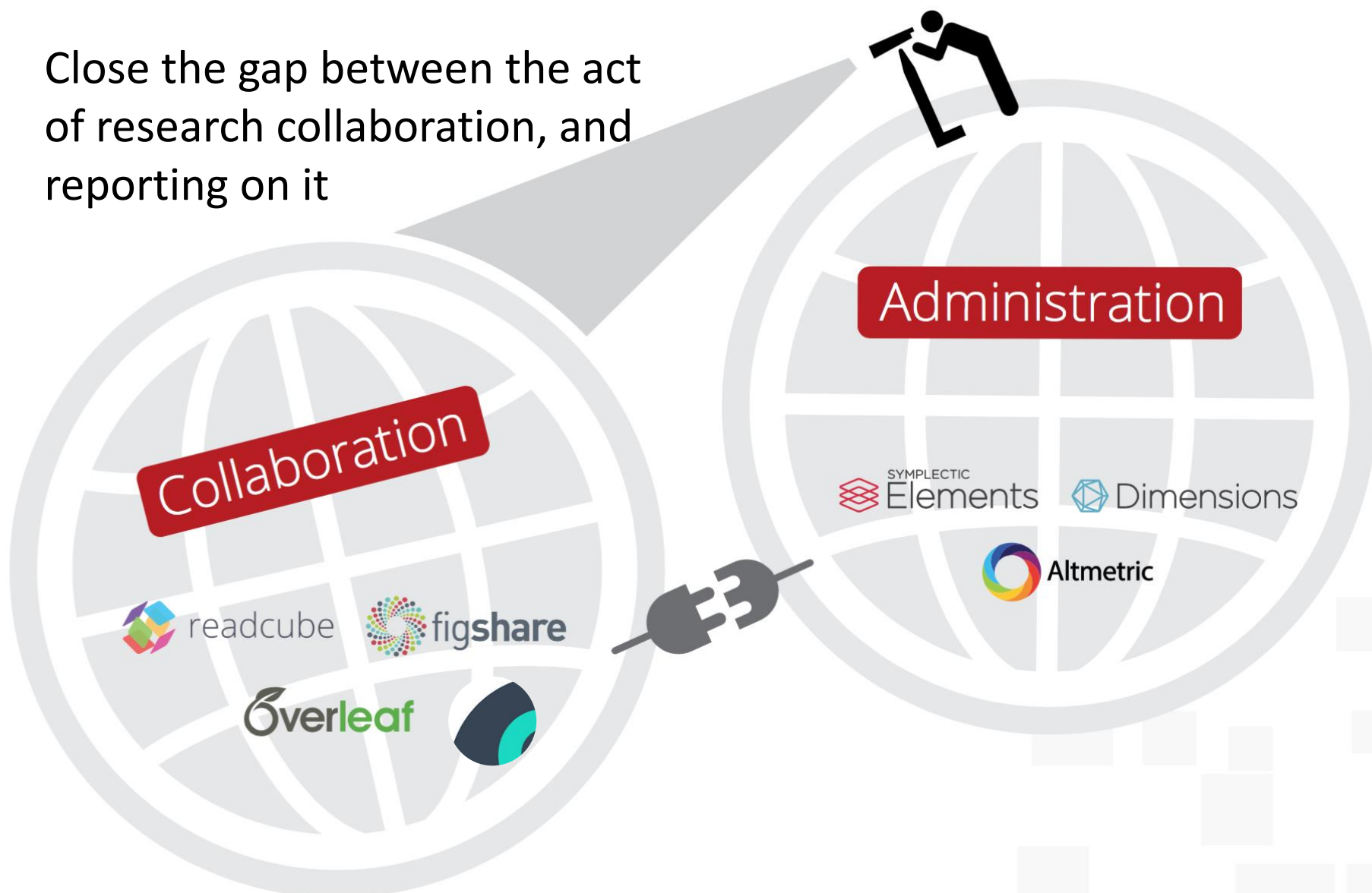


Publisher



What should be possible...

Close the gap between the act
of research collaboration, and
reporting on it



Collaboration

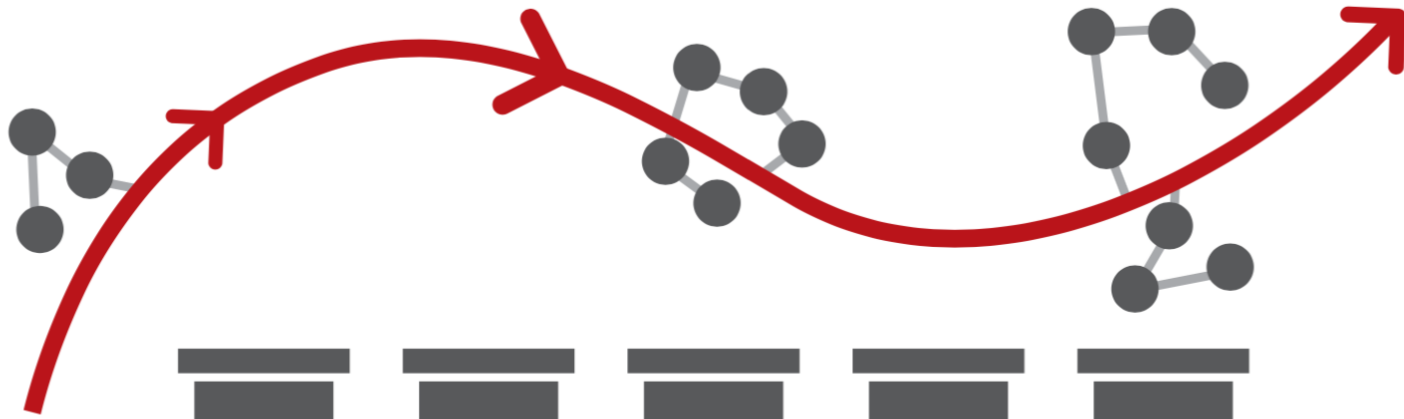


Administration



1st Law of Research Data Mechanics

A research particle can only travel
through a space created by its
Research Information Citizens



Researchers

Funders

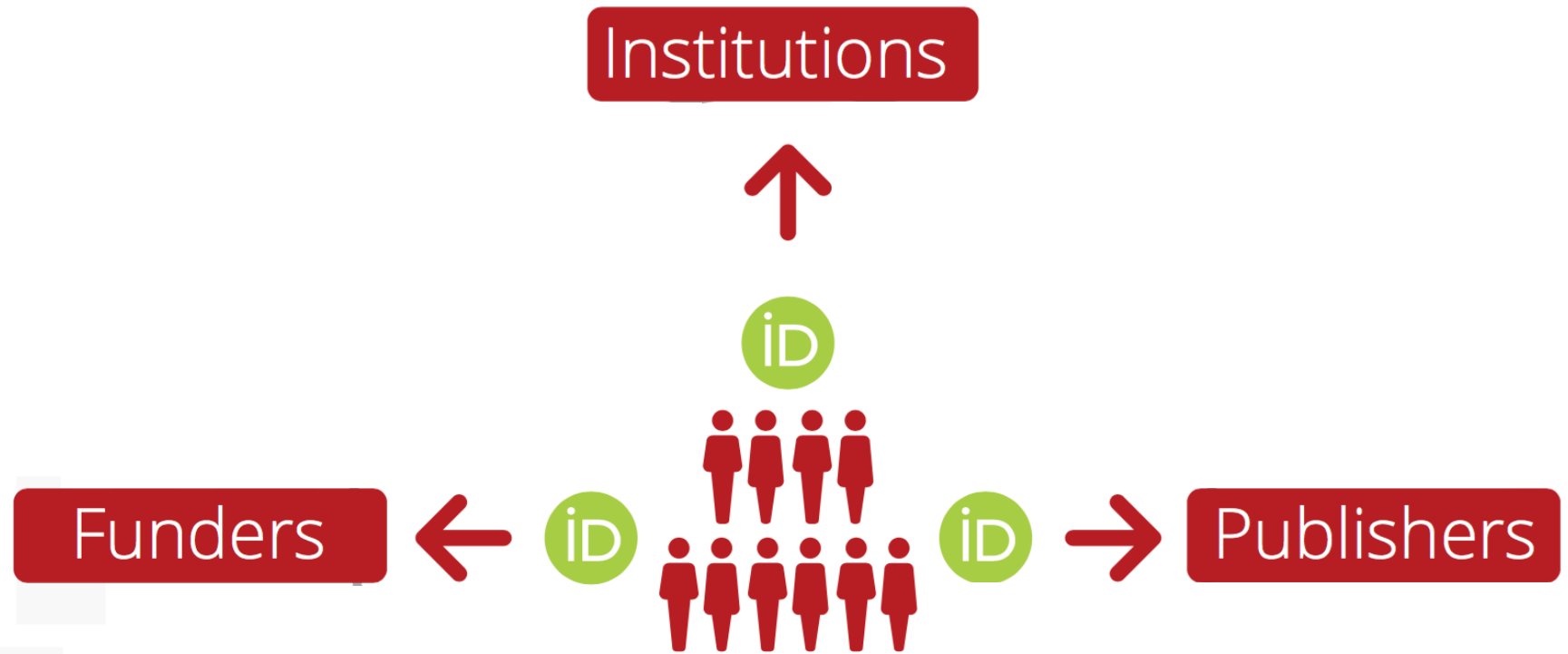
Service providers

Institutions

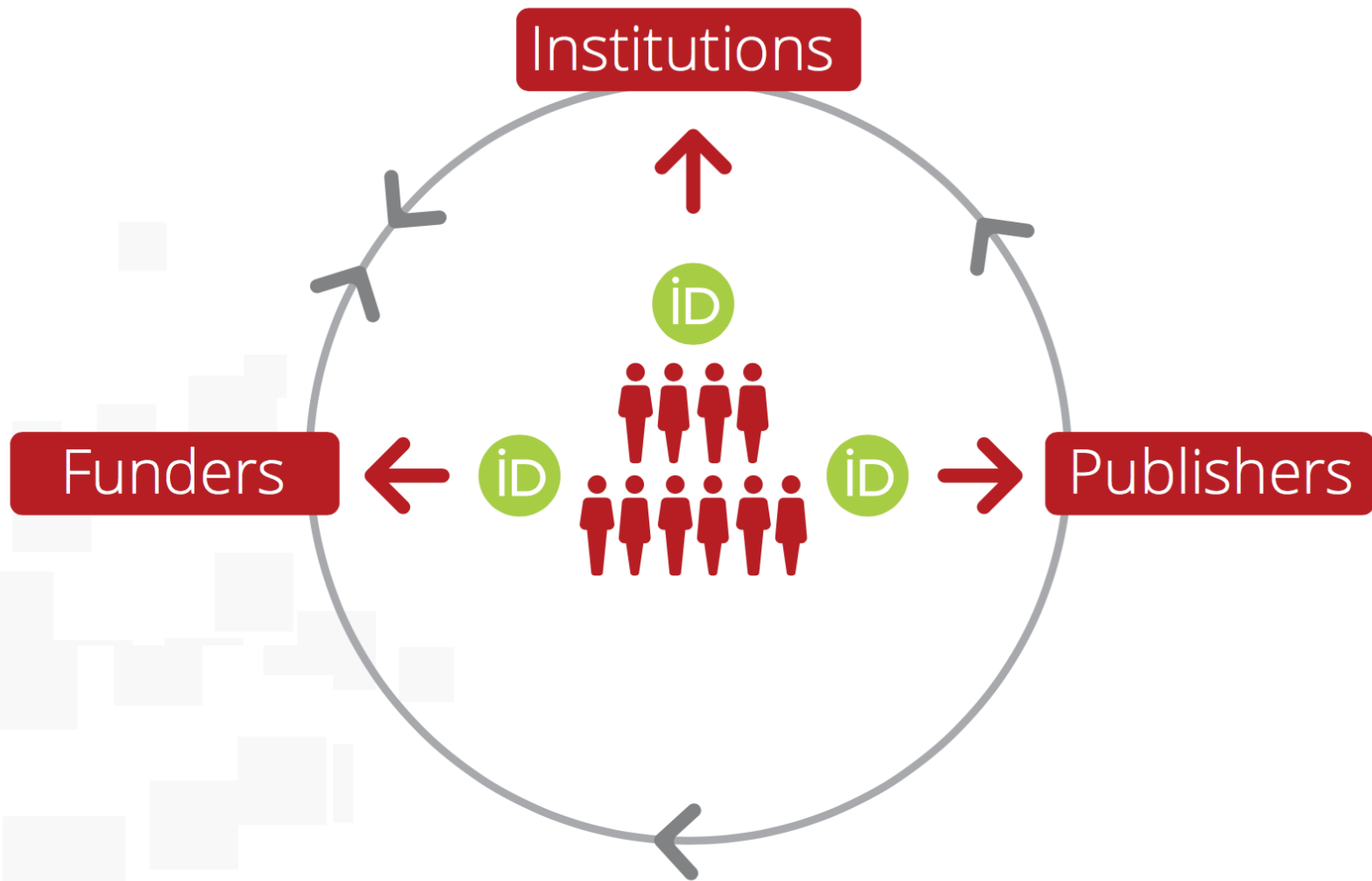
Publishers

Research Information Citizenship

What Is Research Information Citizenship?



The common adoption of Research Information Infrastructure is a good start....



It is when Information practices change to benefit the needs of other Citizens that Research Information Citizenship takes hold

Research Information Citizenship Workshops

<https://docs.google.com/document/d/1BmFRrjA07efxzstco4lesK-r9hIWAKhvnQuTlilFGU/edit?usp=sharing>

FSCI Research Information Citizenship Is?

Initial Document: Lightning workshop at Pidapalooza 2018

- Institutional perspectives added at VIVO 2018
- New revisions added as FSCI 2018

References:

whitepaper

https://figshare.com/articles/Digital_Science_White_Paper_A_New_Research_Data_Mechanics/3514859

Research Information Citizenship presentation:

https://figshare.com/articles/Exploring_the_relationship_between_persistent_identifiers_and_research_information_citizenship/4220454

If we are Research Information Citizens...

- Who are we?
- What do we believe?
- What languages do we speak?
- What are our responsibilities?
- How do we work together?
- What are our social norms?
- How self aware are we as a Research Information Society?
- What is Missing?

Who are we?

- Government
- Labs, facilities, etc
- Universities
- Citizens!
- Libraries
- Researchers
- Aspiring politicians
- Funders

Making the most of our new information universe

FILTERS FAVORITES

- MY GROUPS
 - OPERA Universities
 - random researchers
 - Seattle
 - University of Rochester
- PUBLICATION YEAR
- RESEARCHER
- FUNDER
- FUNDER GROUP
- COUNTRY OF FUNDER
- RESEARCH ORGANIZATION
- LOCATION - RESEARCH ORGANI...
- RESEARCH CATEGORIES
- PUBLICATION TYPE
- SOURCE TITLE
- PUBLISHER
- JOURNAL LIST

PUBLICATIONS 100,658,786 GRANTS 4,580,561 PATENTS 38,362,634 CLINICAL TRIALS 457,882

Sort by: Publication Date

Title, Author(s), Bibliographic reference - [About the metrics](#)

Boron-incorporating hemagglutinating virus of Japan envelope (HVJ-E) nanomaterial in boron neutron capture therapy

Shuichiro Yoneoka, Yasuhiro Nakagawa, Koichiro Uto, Kazuma Sakura, Takehiko Tsukahara, Mitsuhiro Eb...
2019, Science and Technology of Advanced Materials - Article

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Energy-harvesting materials based on the anomalous Nernst effect

Masaki Mizuguchi, Satoru Nakatsuji
2019, Science and Technology of Advanced Materials - Article

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Synthesis and modelling of the mechanical properties of Ag, Au and Cu nanowires

Nurul Akmal Che Lah, Sonia Trigueros
2019, Science and Technology of Advanced Materials - Article

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Corrosion fatigue in DLC-coated articulating implants: an accelerated methodology to predict realistic interface lifetime

Ainhoa Pardo, Emilija Ilic, Kerstin Thorwarth, Michael Stiefel, Roland Hauert
2019, Science and Technology of Advanced Materials - Article

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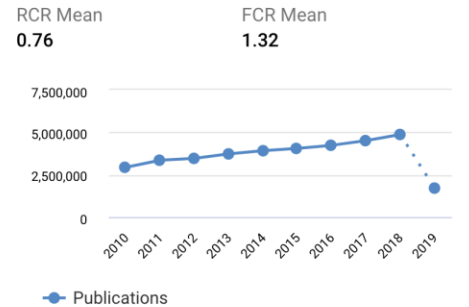
Substitutional and interstitial impurity p-type doping of thermoelectric Mg₂Si: a

ANALYTICAL VIEWS

RESEARCH CATEGORIES

1103 Clinical Sciences	5,364,004
0601 Biochemistry and Cell Biology	2,965,729
1117 Public Health and Health Services	2,916,647
0306 Physical Chemistry (incl. Structural)	2,773,383
0912 Materials Engineering	2,531,047

OVERVIEW



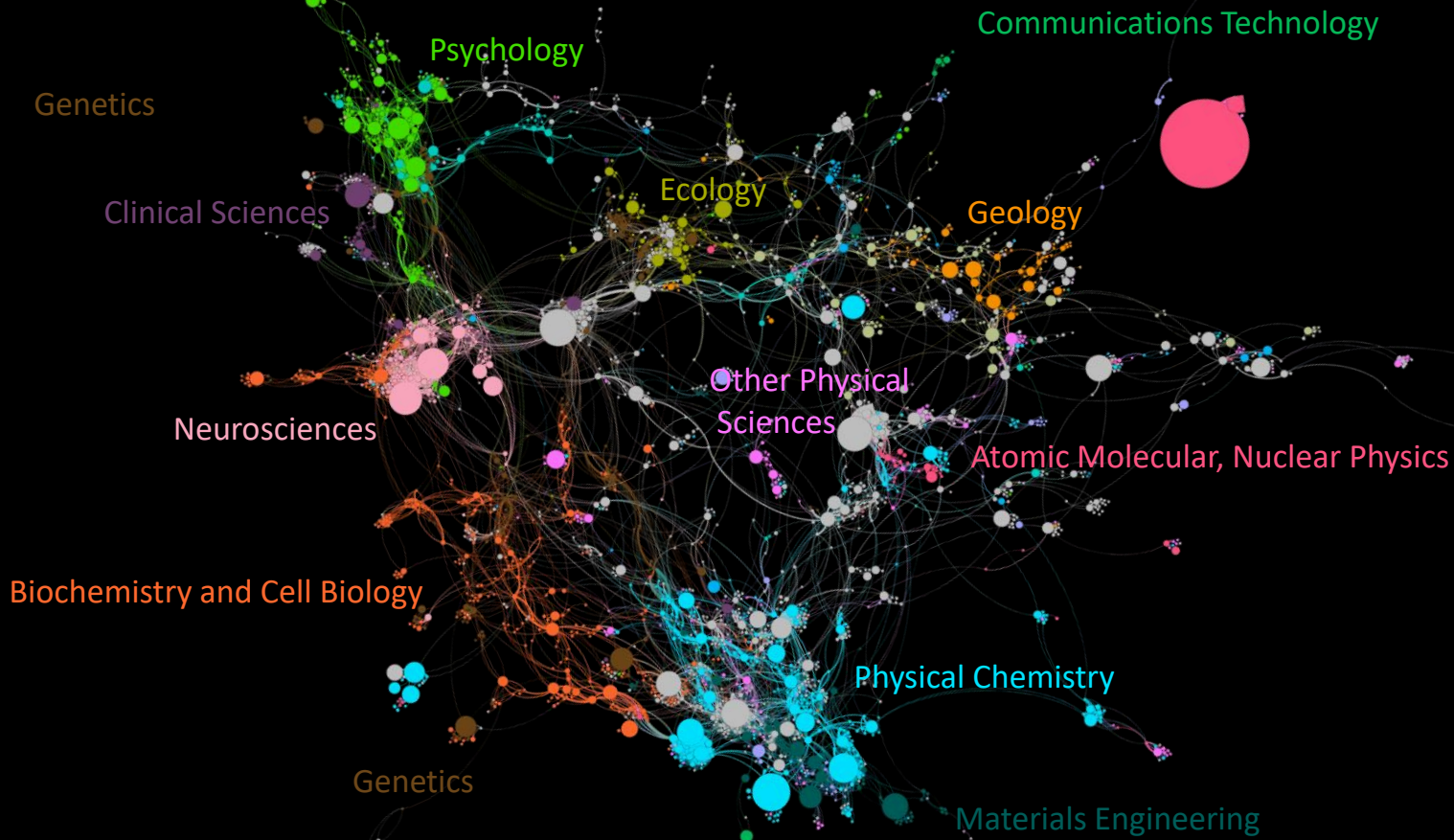
OPEN ACCESS

Closed	77,246,153
All OA	23,412,633
Bronze	11,714,947
Pure Gold	2,844,897

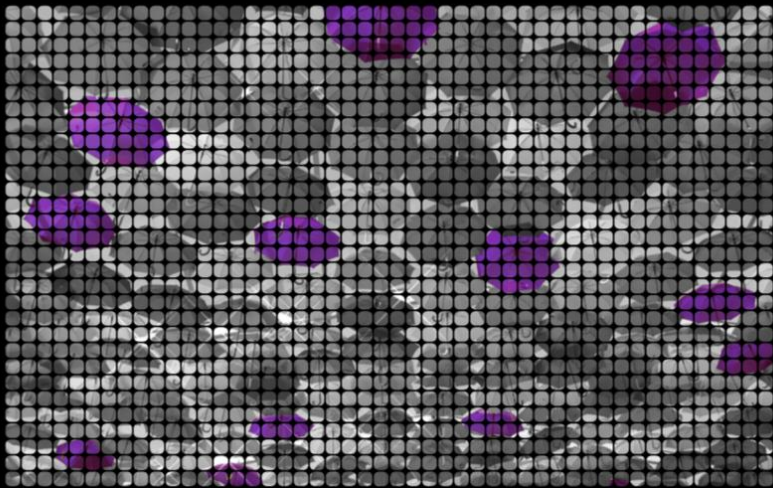
Making the most of our new information universe



University of Boulder Colorado Internal Co author Collaboration Patterns 2013-2018



Size of node is proportional to career publications



Digital Research Reports

Gender Representation in UK Research Institutions

An analysis of gender representation by field of research at UK institutions

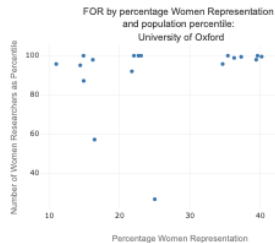
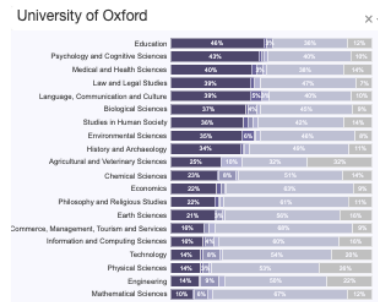
Dr Helene Draux, Simon Porter, Ricarda Beck and Dr Suze Kundu
Foreword by James Greenwood-Lush and discussion by Dr Jessica Hamer

JANUARY 2019

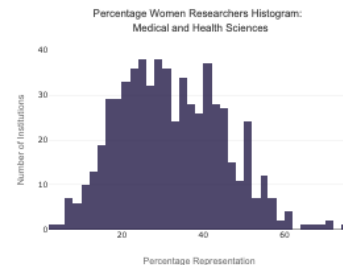
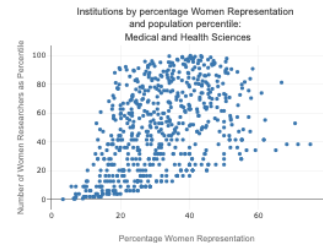
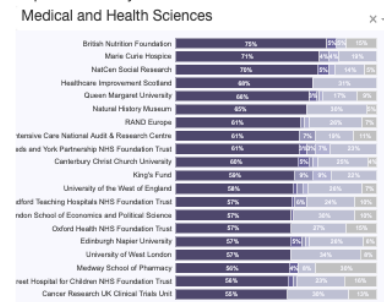
Gender Representation in UK Research Institutions (2012-2017)

The following gender analysis was produced using the [Dimensions API](#) as at (11th Jan 2019). The gender of author names were obtained using the python package [gender_guesser](#).

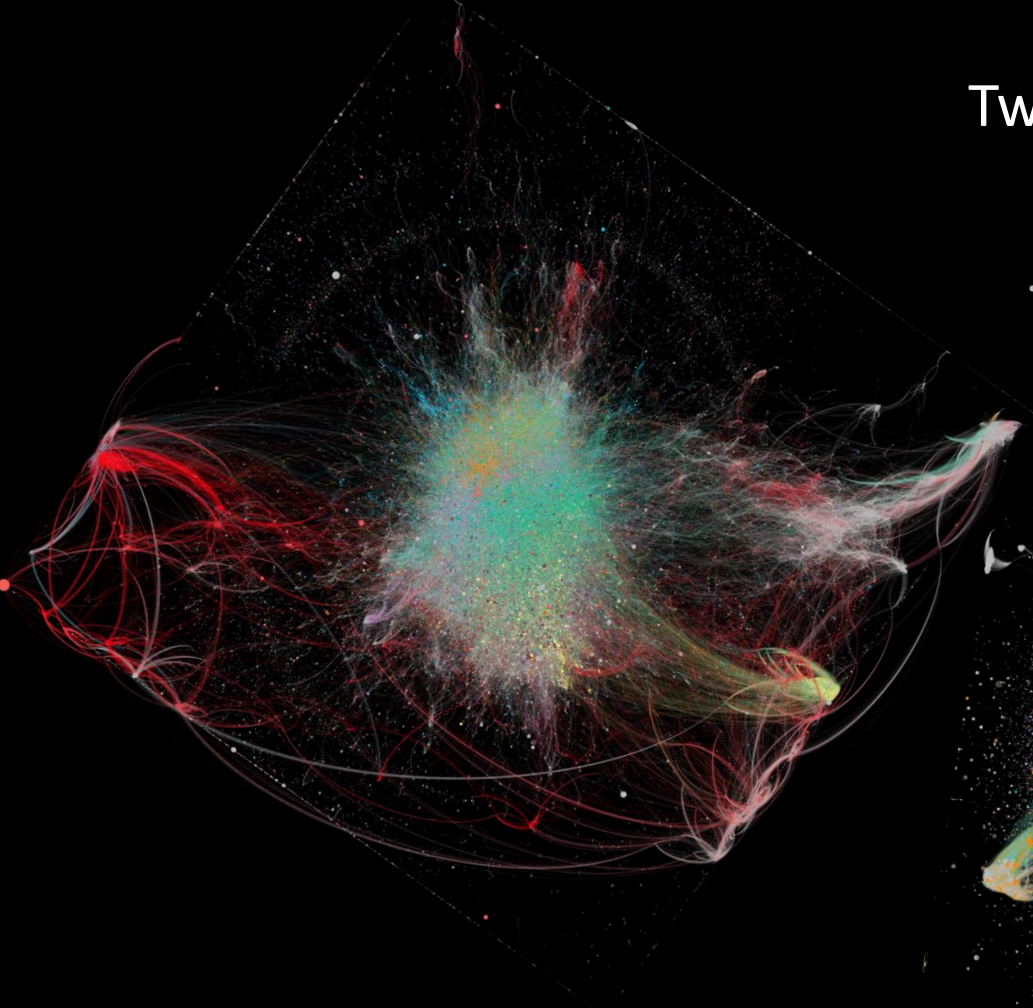
Select a University to view Gender Representation by Field of Research



Select a Field of Research to view Gender Representation by Institution



Two views on Artificial Intelligence





Projects

Local Cloud

Filter Projects by name or description

Add Project

Create New

Import Existing

Stopped

topic-modeling-pipeline

sjcporter
Created on 03/09/19
Modified 3 days ago

Topic Modeling Pipeline

File Edit View Run Kernel Tabs Settings Help

Launcher DSL.properties 7. International linkages co

```

labels = {}
for n in nodes.keys():
    labels[n] = nodes[n]['name']

[11]: pos = nx.spring_layout(G)
       colors = range(20)
       plt.figure(figsize=(10,10))
       nx.draw(G, pos, node_color='#A0CBE2', labels=labels)
       plt.show()
```

Created on 11/08/18
Modified 4 days ago

Created on 03/21/19
Modified 5 days ago

No description provided

sjcporter
Created on 11/23/18
Modified 5 days ago

can we get a ubuntu desktop working...
using VNC to browser and configurable
proxy
with selenium

