



# Moving toward Connecting the Dots

## Using Research Networking and Profiling Databases to Promote Research Impact Assessment and Compliance

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SRA INTERNATIONAL  
ANNUAL MEETING  
**CHICAGO 2024**  
OCTOBER 26-30

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# Learning Objectives

Describe the capabilities of and data contained within a research networking and profiling system (RNPS).

Identify the benefits as well as challenges to implementing and maintaining such a system.

Understand the research metadata ecosystem and how it can integrate with platforms such as ORCID and SciENCv

# Are you familiar with research networking and profiling systems?

<https://www.menti.com/alugisdw69hy>



# Are you aware of such a system at your institution?

<https://www.menti.com/alugisdw69hy>



# Have you used research impact data in your work, development, compliance?

<https://www.menti.com/alugisdw69hy>





# What is a research networking & profiling system?

## Networking:



- Software typically creates connections between scholars, organizations
- Can generally import/export data with ease
- Often have public, searchable portal – increases public visibility and discoverability

## Profiling:



- Database used to create profiles for scholars at an individual institution to manage and record scholarly activities
- Typically *inward* looking
- Can contain a variety of content:
  - Publications, honorific awards, grants, films, books
- Data can be added manually or automatically
- Allow for detailed searches/data mining/analytcs



## Research networking & profiling system (RNPS) vendors and platforms

- Elsevier Pure
- Symplectic Elements
- Clarivate Converis
- Academic Analytics Discovery/Faculty Insight
- Profiles (open source, Harvard)
- VIVO (open source)

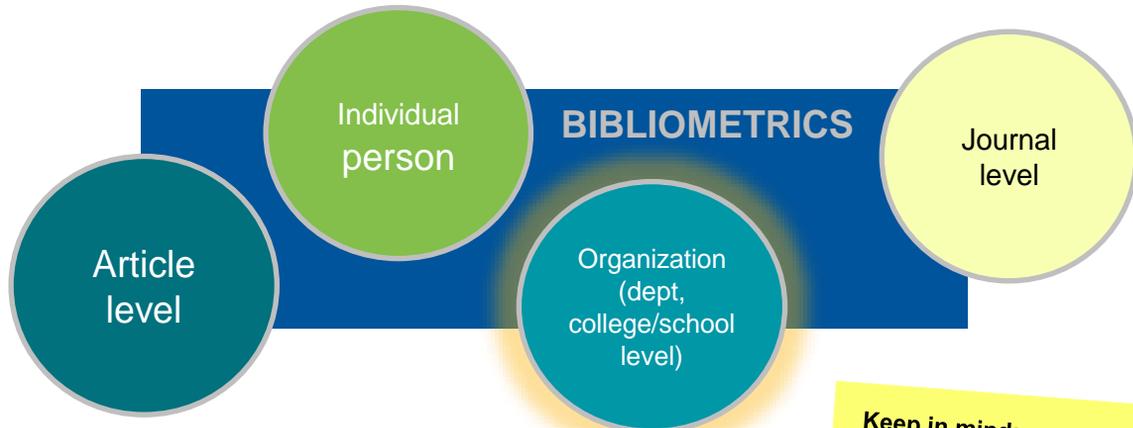
**This is not a product endorsement  
of any kind!**

### **Keep in mind:**

- Systems can be costly in setup and maintenance
- Each has similarities and differences
- Difficult to get institutions to agree on a single platform



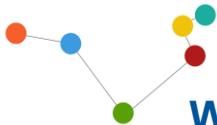
# Common bibliometrics/analyses



- Number of publications
- Citations (impact, number, rate)
  - Eigenfactor
- H-index
- Journal impact factor
- Altmetrics

## Keep in mind:

- Everyone has their opinion on bibliometrics and how to calculate them
- Source systems for institutional data are generally better for reporting on that data



# What is not a research networking & profiling system?

## Publication databases

- PubMed
- Web of Science
- Scopus
- Crossref

## Benchmarking platforms

- InCites
- SciVal
- Dimensions
- Academic Analytics Benchmarking

## Persistent identifiers

- ORCID
- Scopus ID
- Web of Science ResearchID

### **Keep in mind:**

Promotion and tenure (P&T) systems may be one and the same, they may not be.



# Isn't this just Google Scholar?

- Google Scholar will index *everything* it can find – including duplicates, weird stuff
- Highly dependent on faculty curation
- No (easy) export function for analytics, hard to report at institutional level
- Does not show connections between scholars or institutions



**Milan Mrksich**

**Jessica L. Eisenberg<sup>1</sup>, Kristin G. Beaumont<sup>1, 3</sup>, Desire Takawira, Susan B. Hopkinson<sup>1, 4</sup>**

Authors Milan Mrksich, GR Scott Budinger, Jonathan CR Jones

Publication date 2013

Description Receptor clustering upon cell-substratum attachment induces assembly of cytoplasmic protein 2 complexes termed focal adhesions (FAs), which connect, albeit indirectly, extracellular matrix to 3 the cytoskeleton. A subset of cultured primary alveolar epithelial cells (AEC) display a unique 4 pattern of vinculin/paxillin/talin-rich FAs in two concentric circles when cultured on glass and 5 micro-patterned substrates: one ring of FAs located at the cell periphery (pFAs), another FA ring 6 located centrally in the cell (cFAs). Unusually, cFAs associate with an aster-like actin array as 7 well as keratin bundles. Moreover, cFAs show rapid paxillin turnover rates following 8 fluorescence recovery after photobleaching and exert traction forces similar to those generated 9 by FAs at the cell periphery. The plectin protein plectin localizes to cFAs and is primarily absent 10 from pFAs, whereas tensin, a marker of mature/fibrillar adhesions, is found in both cFAs and 11 pFAs. In primary AEC in which plectin expression is depleted, cFAs are largely absent with an 12 attendant reorganization of both the keratin and actin cytoskeletons. We suggest that the 13 mechanical environment in the lung gives rise to the assembly of unconventional FAs in AEC. 14

Scholar articles Jessica L. Eisenberg<sup>1</sup>, Kristin G. Beaumont<sup>1, 3</sup>, Desire Takawira, Susan B. Hopkinson<sup>1, 4</sup>, M Mrksich, GRS Budinger, JCR Jones - 2013

Related articles



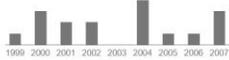
**Milan Mrksich**

**Science1997, 276, 1425**

Authors Ch S Chen, M Mrksich, S Huang, GM Whitesides, DE Ingber

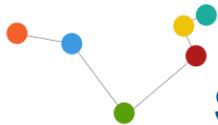
Journal Google Scholar There is no corresponding record for this reference

Total citations Cited by 17

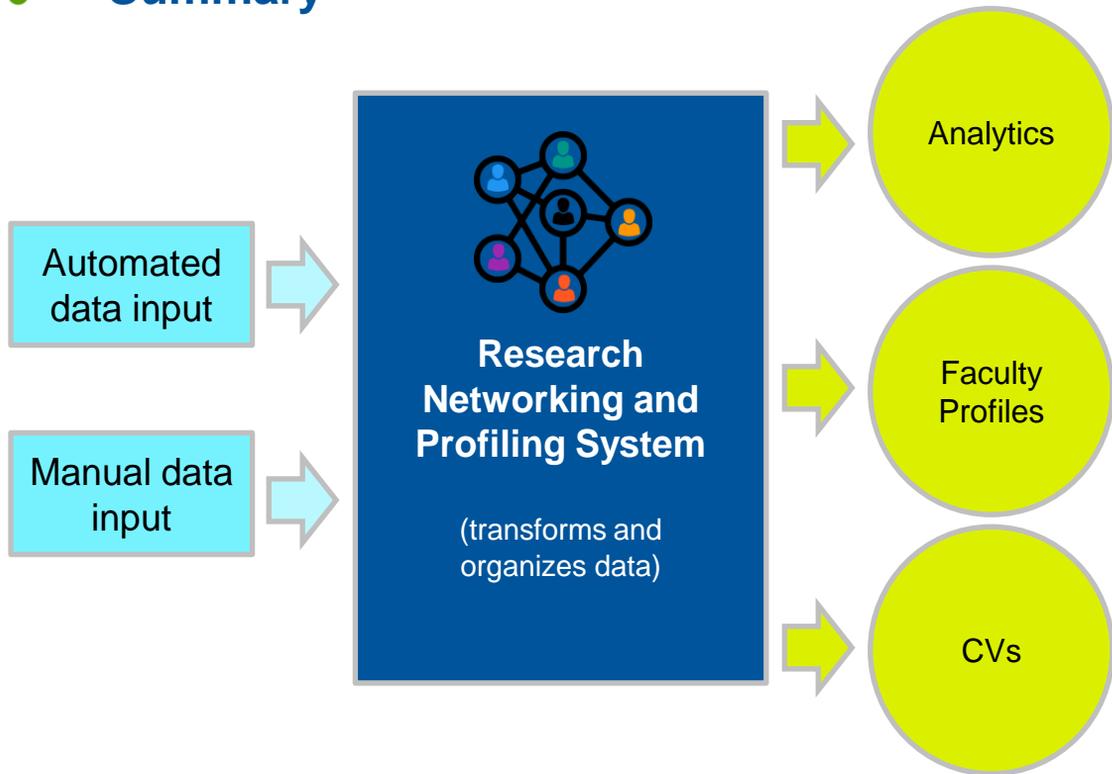


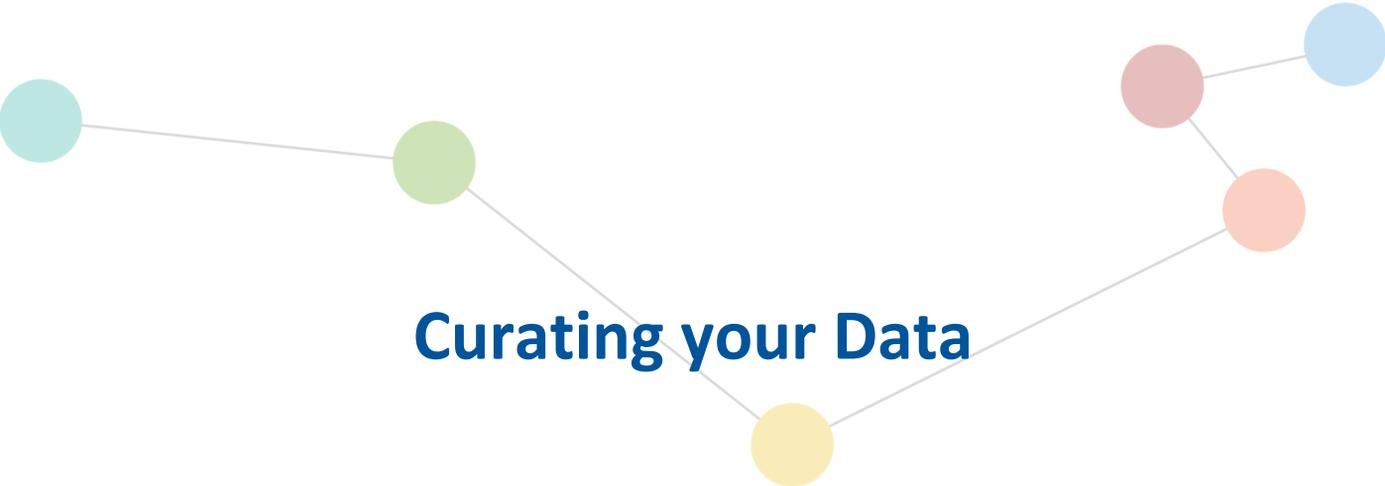
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CS Chen, M Mrksich, S Huang, GM Whitesides... - Google Scholar There is no corresponding record for ...  
Cited by 17 Related articles



# Summary

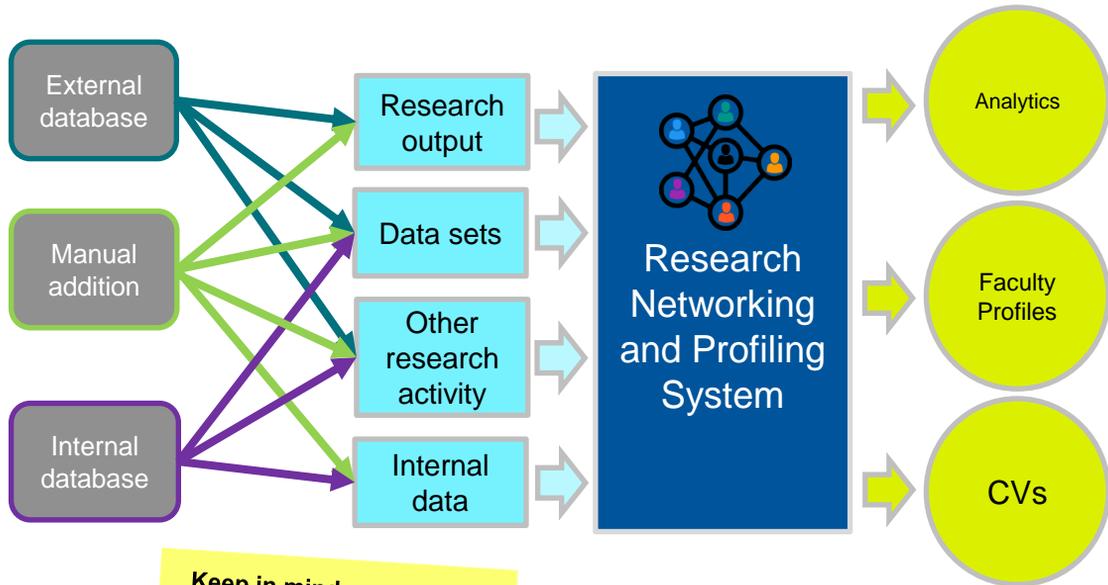




# Curating your Data

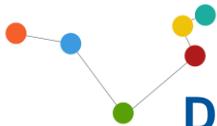


# Sources of data



## Keep in mind:

- Mix of manual & automatic
- API setups can be difficult/time consuming
- Fields outside STEM have limited data coverage
- Shadow systems prevalent
- Data sets brand new



# Disambiguation



Publication metadata:  
**J. Doe, Chicago**

????????????

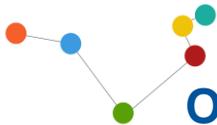
Jane Doe, UIC  
Department of  
Chemistry

Jane Doe,  
Northwestern  
Department of  
Medicine

John Doe, UIC  
Department of History

Jan Doe,  
Northwestern  
Simpson Querrey  
Institute

- Same name, different person
- Incorrect/incomplete affiliations on publications, typos
- Name changes, aliases, using different combinations of names, initials, etc.
- RNPS can help:
  - Algorithms to match with correct person
  - Profile refinement – extra \$\$\$ involved



# ORCiD takes away the guesswork!



Publication metadata:

**J. Doe, Chicago**

 0000-1234-5678-9000



Jane Doe, UIC  
Department of  
Chemistry

Jane Doe, Northwestern  
Department of Medicine  
 0000-1234-5678-9000

John Doe, UIC  
Department of History

Jan Doe,  
Northwestern  
Simpson Querrey  
Institute

- Free, standardized, portable persistent identifier that can tie research output, grants, etc. to a unique person
- Makes disambiguation much easier
- Other persistent identifiers are available for other data types
  - ROR ID - institution
  - Core Facility IDs
  - RRD – biomedical resources

### Keep in mind:

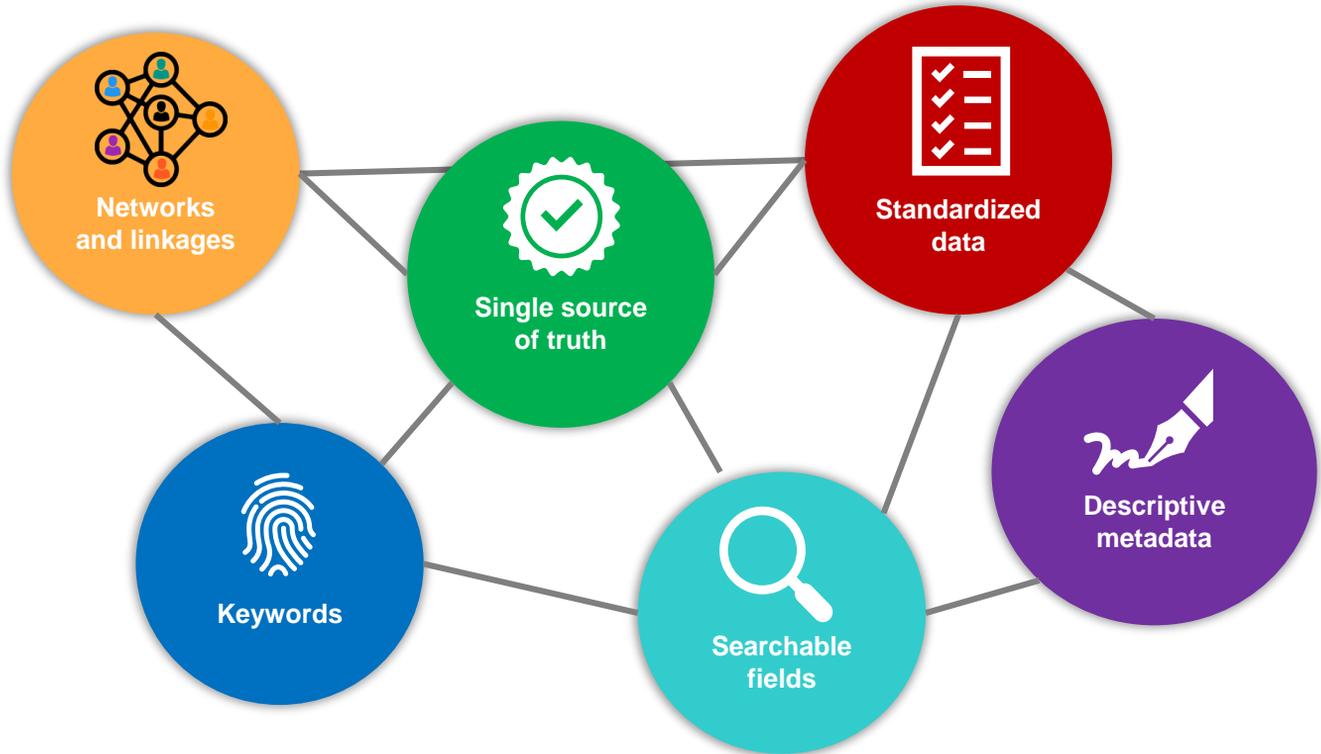
- ORCID is very useful and important to make sure scholars receive credit for their work – start talking to your faculty about it now!
- Does not need a RNPS to work



# Using the Data



## How does having a RNPS make using the data easier?





# Connecting the Dots for Analytics: Research Strategy and Intelligence

## What are our areas of research strength?

Bibliometrics

Impact statements

Promotion & tenure

Program review

## Who are our experts in a field?

Research development

Media/press

Students/postdocs

## Who are our collaborators?

Fostering partnerships

Crisis response

**Analytics can be provided at different grains of organization –  
department, college/school, research center, etc.**

### Keep in mind:

- Reporting can sometimes be basic
- Other services may provide similar insight
- Highly dependent on clean, updated data
- Faculty with multiple appointments, interdisciplinary center challenges



# Connecting the Dots for Compliance: NSPM-33 Memo and CHIPS Act

## Restrictions on Foreign Talent Recruitment Programs and collaborating with countries of interest

RNPS can be useful in identifying international collaborations with co-authors from these restricted entities to guide outreach efforts

## Persistent Identifiers

- ORCiD requirement upcoming for NIH May 2025
- Added benefit for universities will be name disambiguation to identify faculty research output accurately

## Common Disclosure Forms

**BIOGRAPHICAL SKETCH COMMON FORM**  
November 1, 2023

This Biographical Sketch Common Form provides instructions for submission of a biographical sketch for each individual identified as a [restricted entity](#) on a Federally funded research project. The biographical sketch is used to assess how well-qualified the individual, team, or organization is to conduct the proposed activities.

Consistent with NSPM-33, individuals are required to disclose contracts associated with participation in programs sponsored by foreign governments, institutions, or entities, including [Foreign Government-Sponsored Labor, Recruitment or Careers](#). Further, if individuals receive direct or indirect support that is funded by a foreign government-sponsored talent recruitment program, even when the support is provided through an intermediary and does not require membership in the foreign government-sponsored talent recruitment program, that support must be disclosed. Individuals must also report other foreign government sponsored or affiliated activities in accordance with 42 USC § 19312. Individuals are prohibited from being a party to a [Foreign Government-Sponsored Activity](#).

A table entitled, [NSPM-33 Implementation Guidance Pre- and Post-award Disclosures Relating to the Biographical Sketch and Career and Training \(Other Support\)](#) has been created to provide helpful reference information regarding pre- and post-award disclosures. The table includes the type of activities to be disclosed, where such activities must be reported in the application, as well as when updates are required in the application and award lifecycle. A final column identifies activities that are not required to be reported.

Individuals are reminded not to submit any personal information in the biographical sketch. This includes items such as home address, home telephone, fax, or cell phone numbers, home e-mail address, driver's license number, marital status, parental status, and the like. Such personal information is not appropriate for the biographical sketch and is not relevant to the needs of the proposal. The Federal research funding agency is not responsible or in any way liable for the release of such matter.

The format of the Biographical Sketch Common Form is provided below. There is no page or character limit to this section of the application.

**\* is required**

**Submission Information**

**Name:** Enter the name of the senior/key person (Last Name, First Name, and Middle Name, including any applicable suffix).

**Principal Investigator (PI) of the Senior/Key Person:** Enter the PID of the senior/key person. The PID is a unique seven digit identifier that distinguishes the individual from every other individual with the same name.

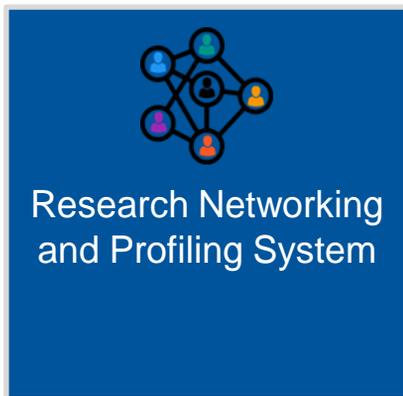
**Position Title:** Enter the current position title of the senior/key person.

\*This table represents A to H entries. For A to Z and Paragraph 1 of the Disclosure Requirements and Identification Section of the NSPM-33 Implementation Guidance.



Many profiling platforms can connect with ORCID and push data into ORCID profile

Take home: this isn't going away, promote the use of ORCID amongst your faculty!

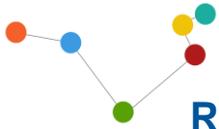


User makes edit to ORCID profile



User makes edit to RNPS profile



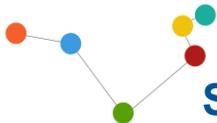


## Reducing Administrative Burden with SciENCv + ORCiD



In addition to ORCiD, effective May 2025 NIH will require the use of SciENCv for generating these common forms

- Draws from NIH My Bibliography, which can connect with ORCiD
- Local RNPS systems can integrate to ORCiD to prepopulate data that can subsequently be ported over to SciENCv using an automated integration available in the tool
- Automatically puts data in approved format
- Keeping a profile up to date makes this process much easier!



# SciENcv – ORCiD is already integrated with NIH & NSF

1. Researchers can import data from their ORCiD profiles into SciENcv

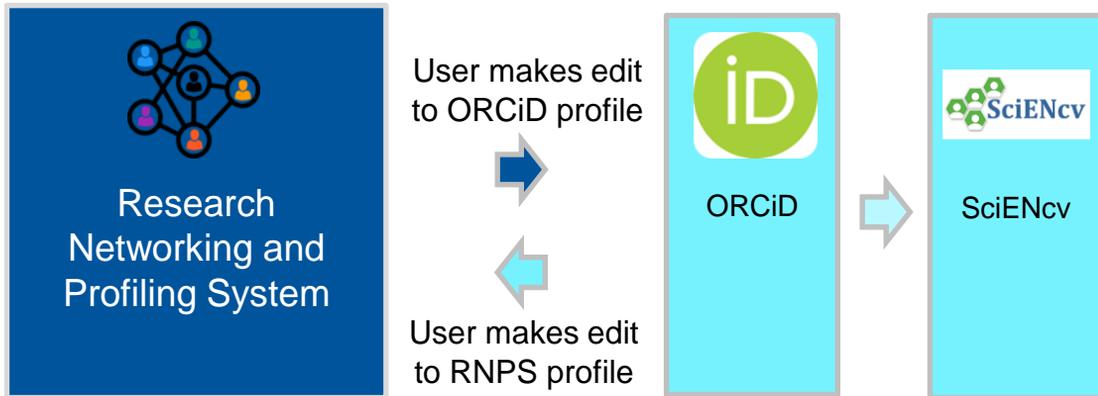
2. SciENcv maps the ORCiD profile fields into the relevant Biosketch format

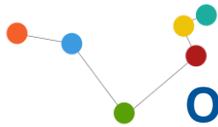
	iD	NIH Biosketch
1.	Biography	Personal Statement
2.	Employment	Positions and Honors
3.	Education	Education/Training
4.	Works	Citations & Contribution to Science
5.	Funding	Additional Information: Research Support and Scholastic Performance

Source: <https://info.orcid.org/wp-content/uploads/2022/08/NCURA.August2022.pdf>



# Summary of ORCID-SciENCv Data Flow





# Open Science Requirements

- Awards from NIH now include requirements around sharing of research data and the accessibility of research results
- Can use RNPS to monitor compliance with these open science-related requirements
- Open access publishing – RNPS contain information about the accessibility of journals, can be used to monitor extent of open access output
- Public data set discovery – can provide a central location for anyone looking for data sets related to a researcher, publication

The screenshot shows the Northwestern University Northwestern Scholars profile for Vicky Kalogera. The profile includes a navigation bar with tabs for Home, Experts, Organizations, Research Output, Grants, Core Facilities, and Research Data. The Research Data tab is highlighted with a red box. The profile details include: Name: Vicky Kalogera; Title: Professor, Physics and Astronomy; Affiliations: Daniel I. Linde Distinguished University Professorship, Physics and Astronomy; Astronomy PhD Program; Physics PhD Program; URIC Director, CIERA - Center for Interdisciplinary Exploration and Research in Astrophysics; Contact: Phone +1 847 491 5669, Email vicky@northwestern.edu; Metrics: h-index 92757, h10-index 115, h5-index; Research activity per year bar chart (1994-2024); Overview, Fingerprint, Network, Grants (101), Research Output (495), Research Data (34), Similar Profiles (10); Datasets section showing 1 - 25 out of 34 results, Start date (descending), and a dataset entry: Binary compact object coalescence rates, O'Shaughnessy, R. (Creator), Kalogera, V. (Creator) & Belczynski, K. (Creator), Centre de Données Strasbourg (CD5), 2012, DOI: 10.26093/cds/wizier.17160615, https://cdsarc.cds.unistra.fr/viz-bin/cat/JAp/716/615 Dataset.

To the future...



# Keep an eye on...


Works ▾Log in Sign up ?

Unsaved search ▾ 🔔 ⚙️ 🔄

Show works where:

1 🔍  includes ▾ "northwestern" ✎ ✕

+

🗑️

### Works

**Vegetation zones and their sections in northwestern Europe**  
 1968 · Teuvo Ahti, Leena Hämet-Ahti, et al. · *Annales Botanici Fennici*  
 Cited by 1,829

**Bedrock incision, rock uplift and threshold hillslopes in the northwestern Himalayas**  
 1996 · Douglas W. Burbank, John Leland, et al. · *Nature*  
 Cited by 1,098

**Mass mortality in Northwestern Mediterranean rocky benthic communities: effects of the 2003 heat wave**  
 2008 · Joaquim Garrabou, Rafel Coma, et al. · *Global Change Biology*  
 Cited by 883

**Late Paleozoic tectonic amalgamation of northwestern China: Sedimentary record of the northern Tarim, northwestern Turpan, and southern Junggar Basins**  
 1995 · Alan R. Carroll, Stephan A. Graham, et al. · *Geological Society of America Bulletin*  
 Cited by 433

**Remote sensing and GIS for mapping and monitoring land cover and land-use changes in the Northwestern coastal zone of Egypt**

### Stats

**649,000 results**

**type**

<input type="checkbox"/> article	555,200
<input type="checkbox"/> book-chapter	19,950
<input type="checkbox"/> dataset	11,700
<input type="checkbox"/> book	11,390
<input type="checkbox"/> preprint	11,010
More...	

**institution**

<input type="checkbox"/> Northwestern University	40,670
<input type="checkbox"/> Chinese Academy of Sciences	17,850
<input type="checkbox"/> Centre National de la Recherche Scientifique	13,090
<input type="checkbox"/> Russian Academy of Sciences	10,980
<input type="checkbox"/> United States Department of the Interior	7,445
More...	

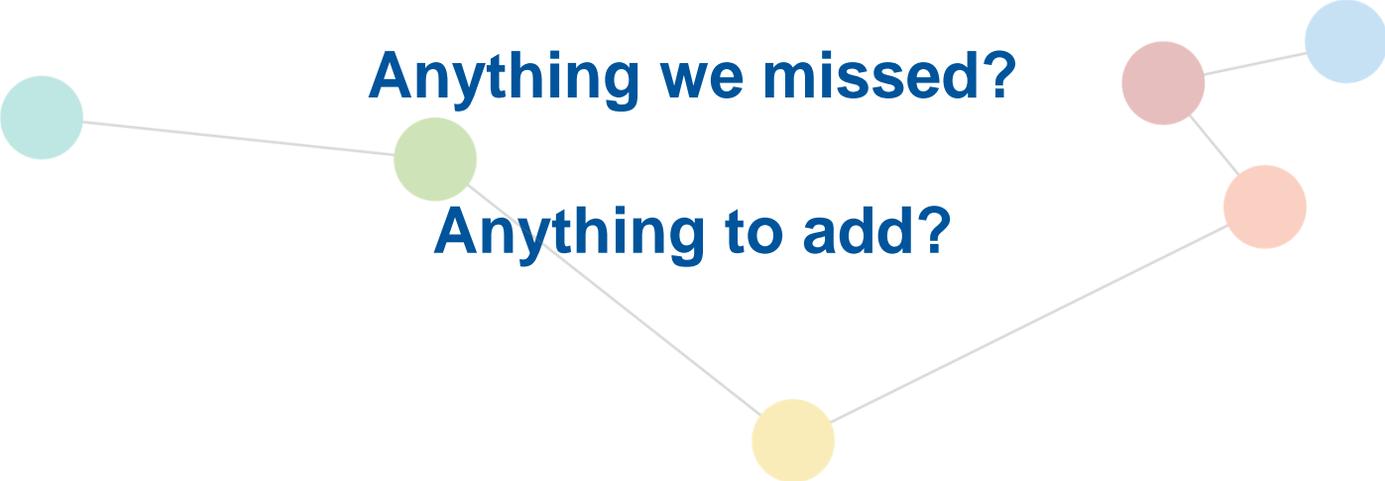
**topic**

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<input type="checkbox"/> Climate Change and Paleoclimatology	17,840
More...	

**open access**



**44.3%**  
287,300



**Anything we missed?**

**Anything to add?**



## If you take nothing else from this presentation...

- RNPS systems can inform data-driven research strategy
  - Metrics/analytics
  - Research Development
  - Data/expertise discoverability
- RNPS systems can assist in research compliance issues
  - Foreign involvement
  - Standardized CVs
  - Start thinking about ORCiD
- RNPS systems aren't perfect – require time, effort, and maintenance



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# Thank you!

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