

Ricgraph

Research in context graph introduction & developments

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Publishing Support & Research Data Services
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Contents

- Ricgraph introduction
- Developments
- Questions
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What is Ricgraph - Research in context graph?

Ricgraph enables the exploration of

- researchers, teams, their results, collaborations, skills, ...
- and their relations
- using a graph (network)

These originate from

- various systems and multiple organizations

You can

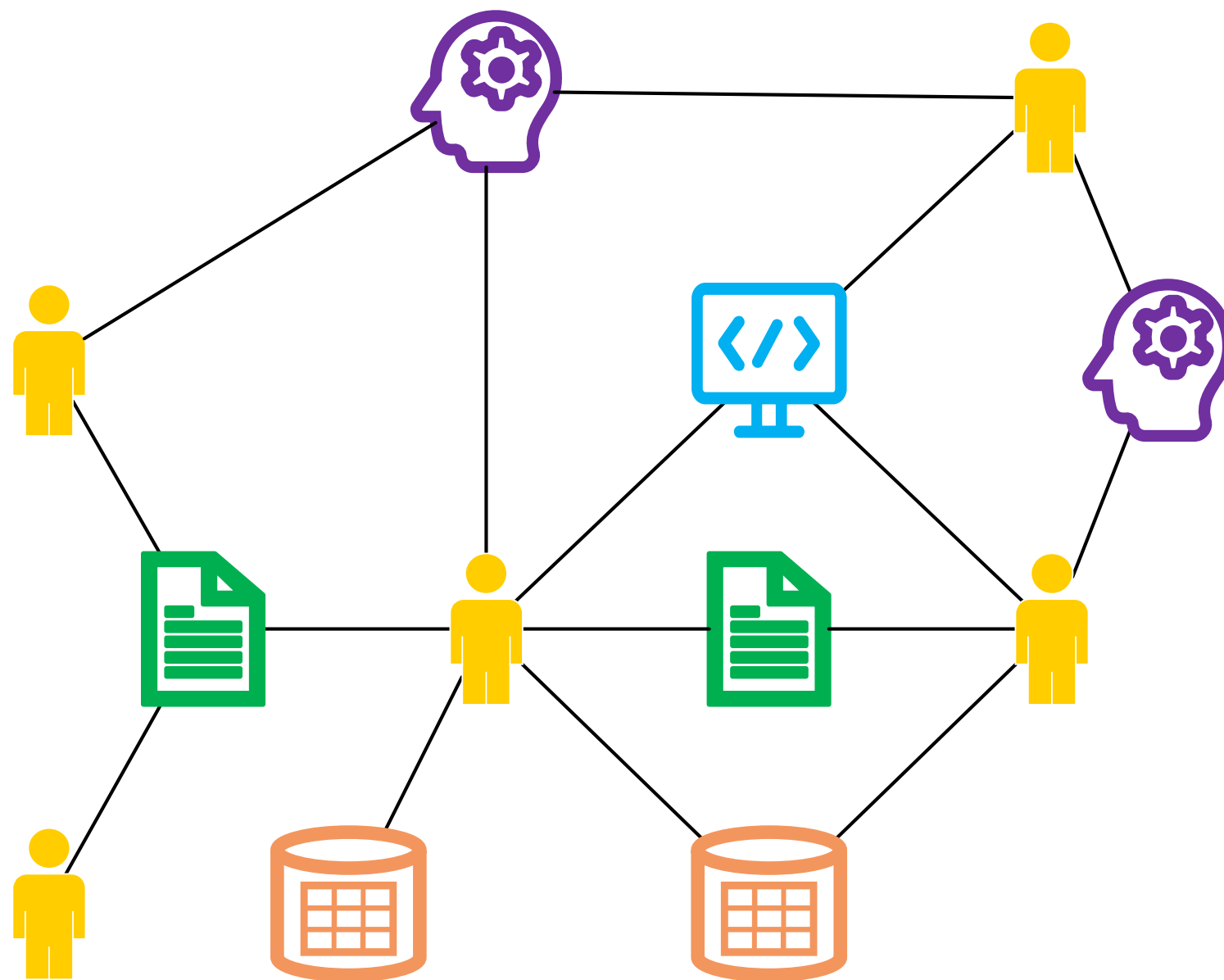
- explore research information
- infer (new) relations



What if...

we look at research information as a network (graph)?

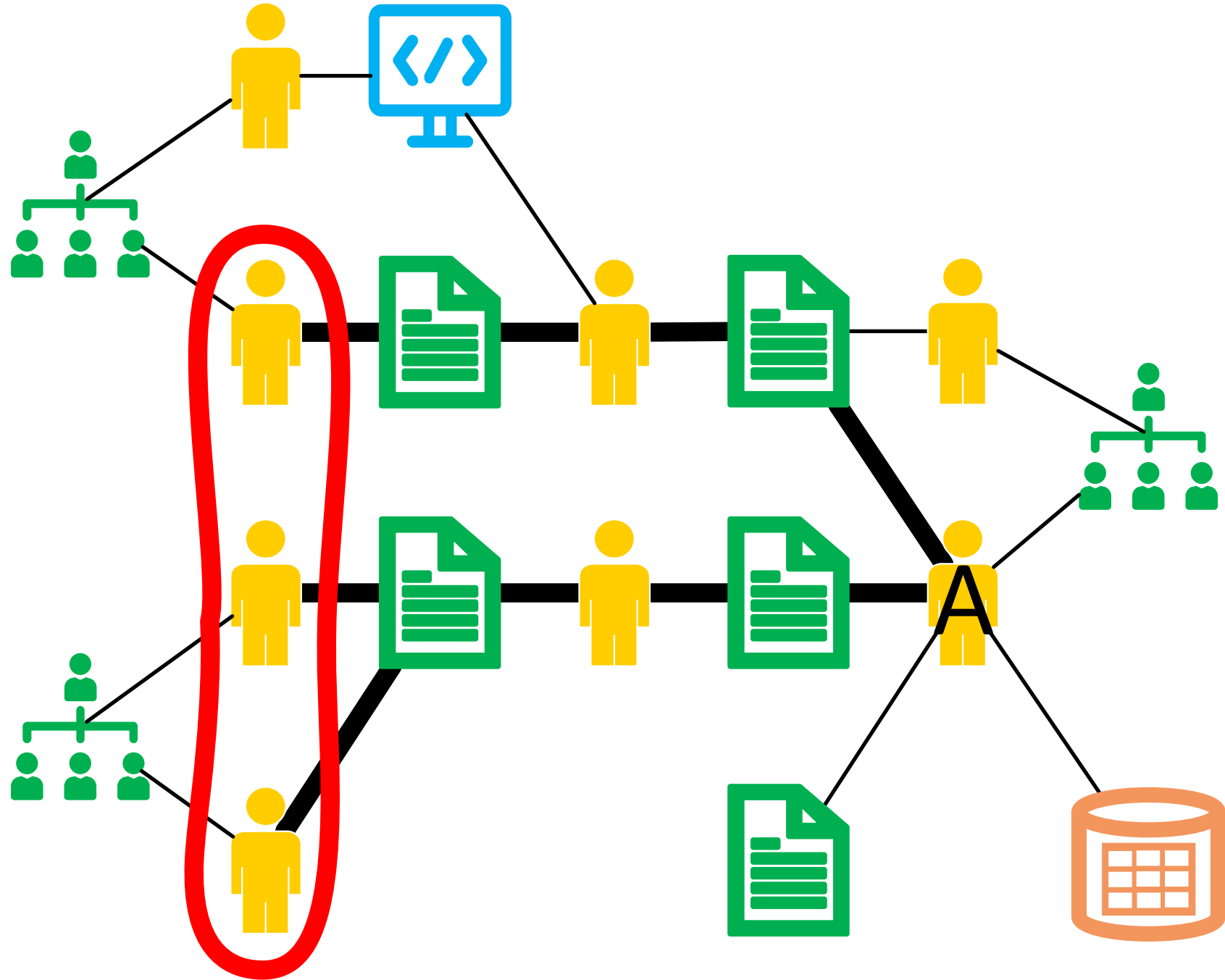
- We have relations between items
- Related items are neighbors
- We can “walk” from one item to another
- No duplicates



What can Ricgraph do?

Use case

As researcher A, I want to find co-authors of my co-authors from other organizations, so that I can read their publications to find out if we share common research interests

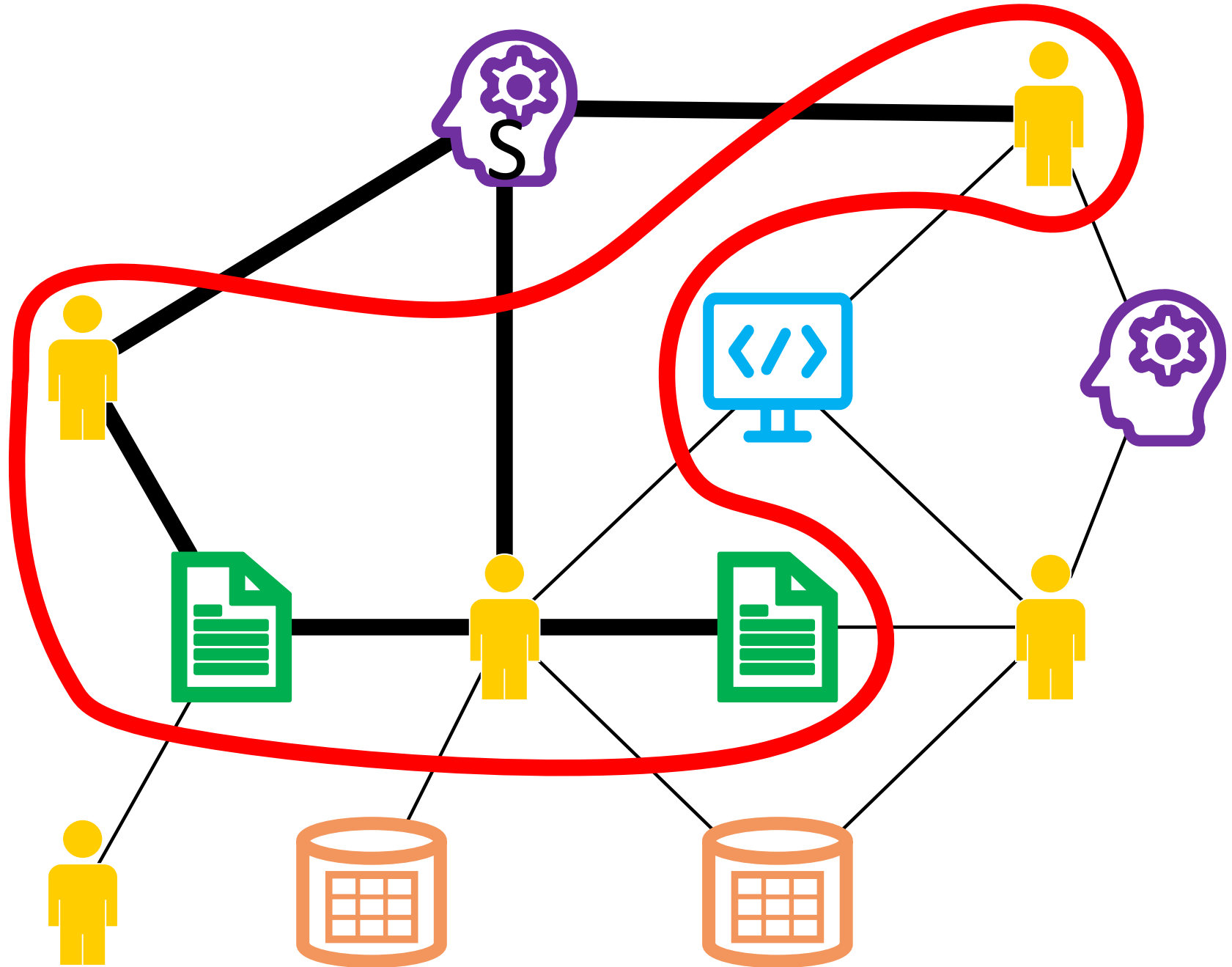


What can Ricgraph do?

Use case

As a journalist, I want to find experts with skill S and their publications, so that I can interview them for a newspaper article

Example skill: climate change, stem cells



Ricgraph developments

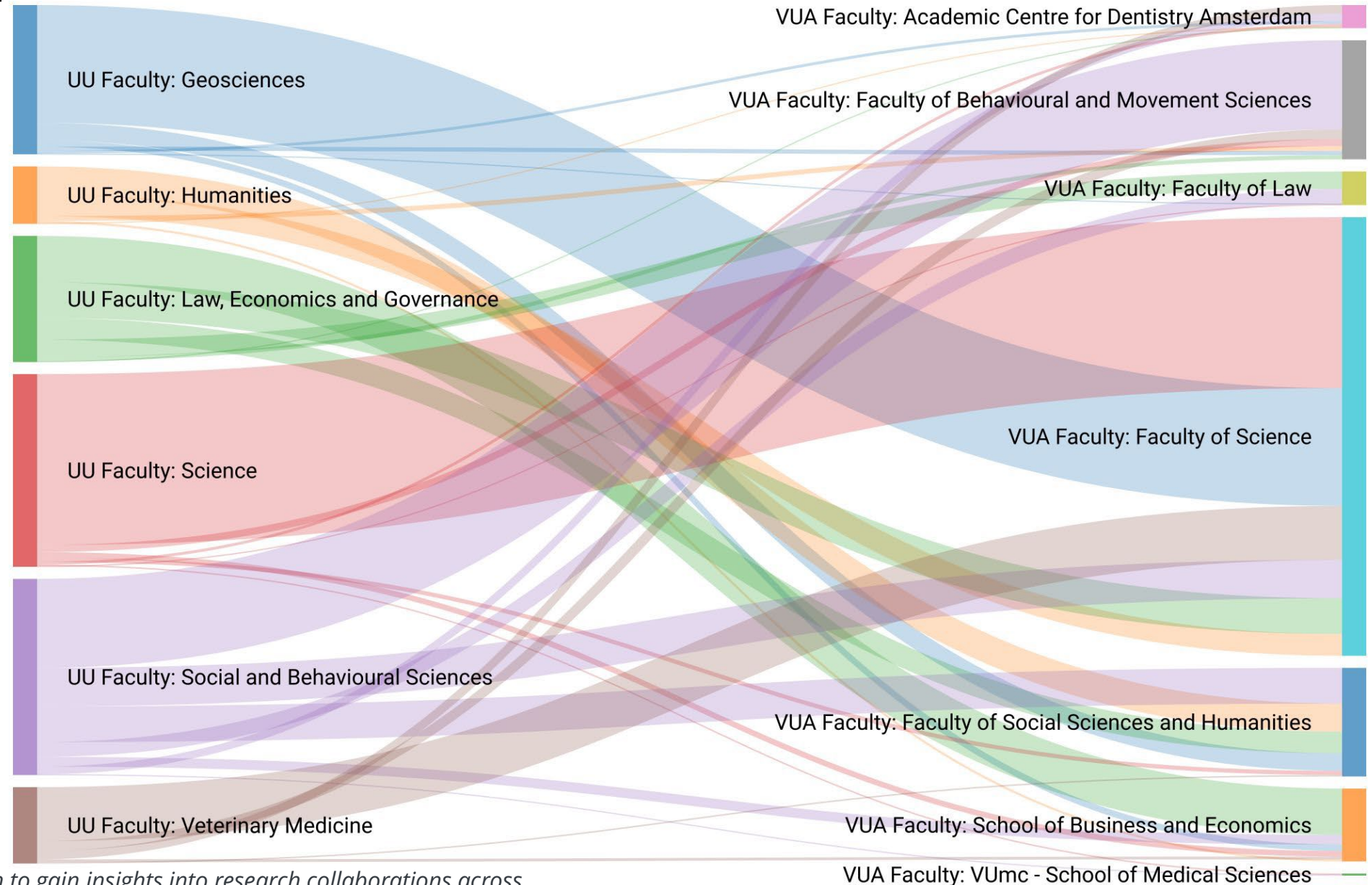




What can Ricgraph do?

Publication collaborations

- UU and VUA faculties, 2022 – July 2025
- Total 1139 collaborations
- Example: UU Geosciences has 168 collaborations with VUA Science

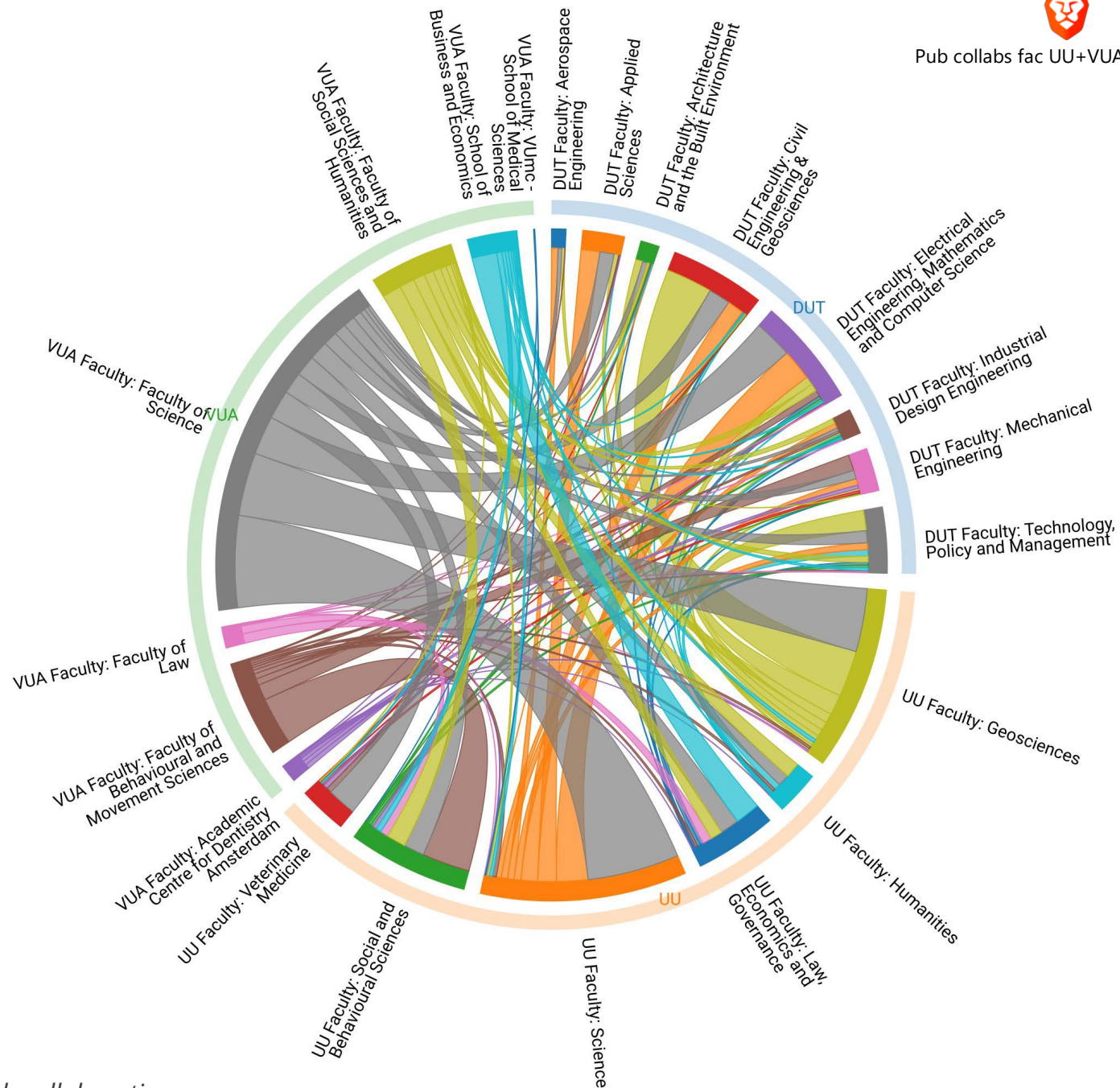




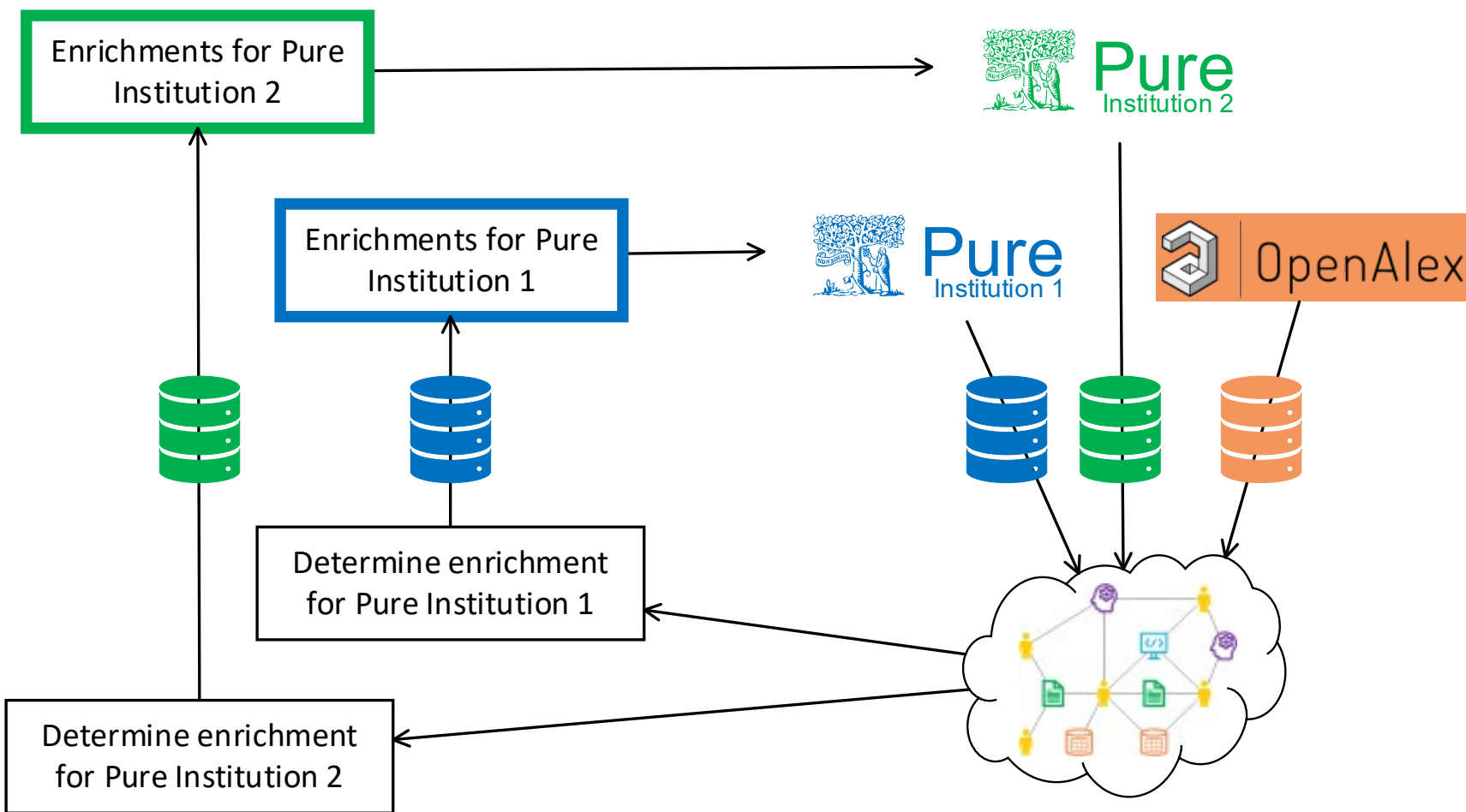
What can Ricgraph do?

Publication collaborations

- UU, VUA, and DUT faculties, 2022 – July 2025
- Example: UU Geosciences has 168 collaborations with VUA Science, and 123 with DUT Civil Engineering & Geosciences



Enriching Pure from OpenAlex and other Pures using BackToPure



Other developments

- Ricgraph chatbot → David Grote Beverborg
- Clean up external organizations in Pure → David
- General harvester → 6 HU students, sept 2025 – jan 2026
- Topics using AI & LLMs → 1 HU student, start ~nov 2025
- Security scan → HU students, ~nov 2025 – jan 2026
- Modern frontend backend UI → 1 HU student



How to use Ricgraph?

Install it on your own laptop or server:

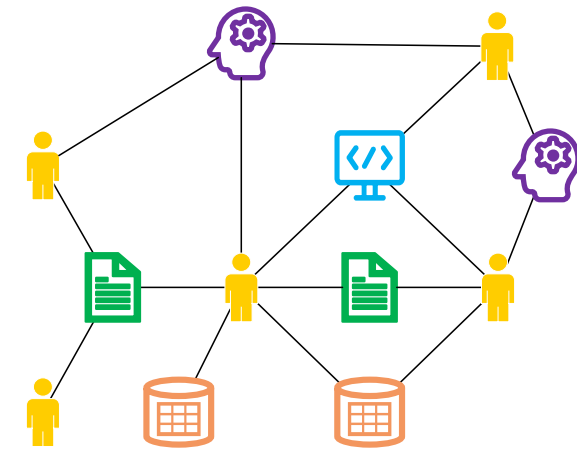
- full control
- choose your own source systems and organizations

Use the pilot Open Ricgraph demo server

<https://explorer.ricgraph.eu>:

- nothing to install
- DUT Pure, OpenAlex, and Research software directory

Questions Demo Discussion



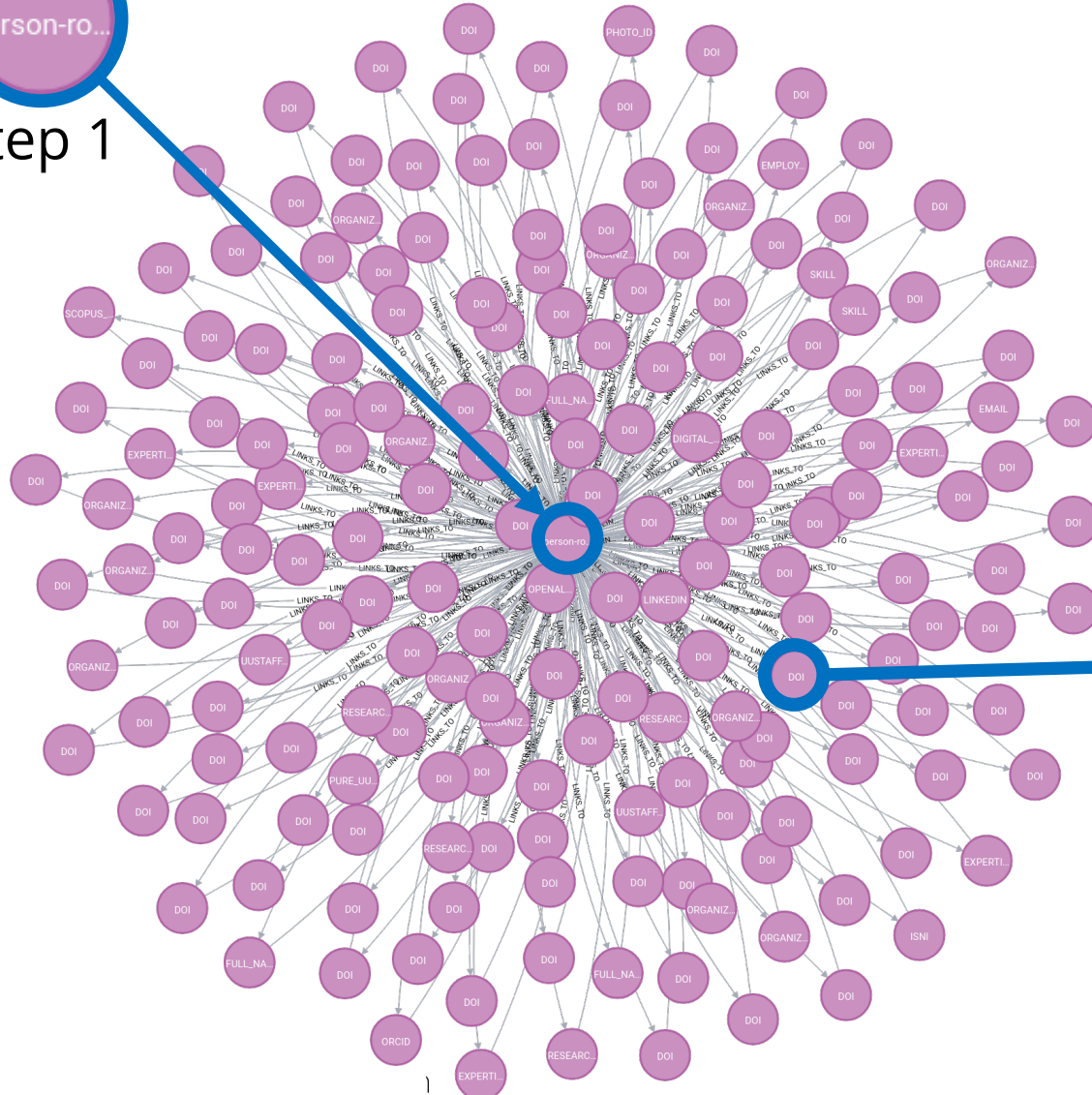
Possible topics:

- UI design for researchers? → see next slide
- (Limited) content coverage?
- Standardization of metadata formats? Is this a problem?
- Handling requests to change the access and content from specific disciplines?
- Competition with other services?

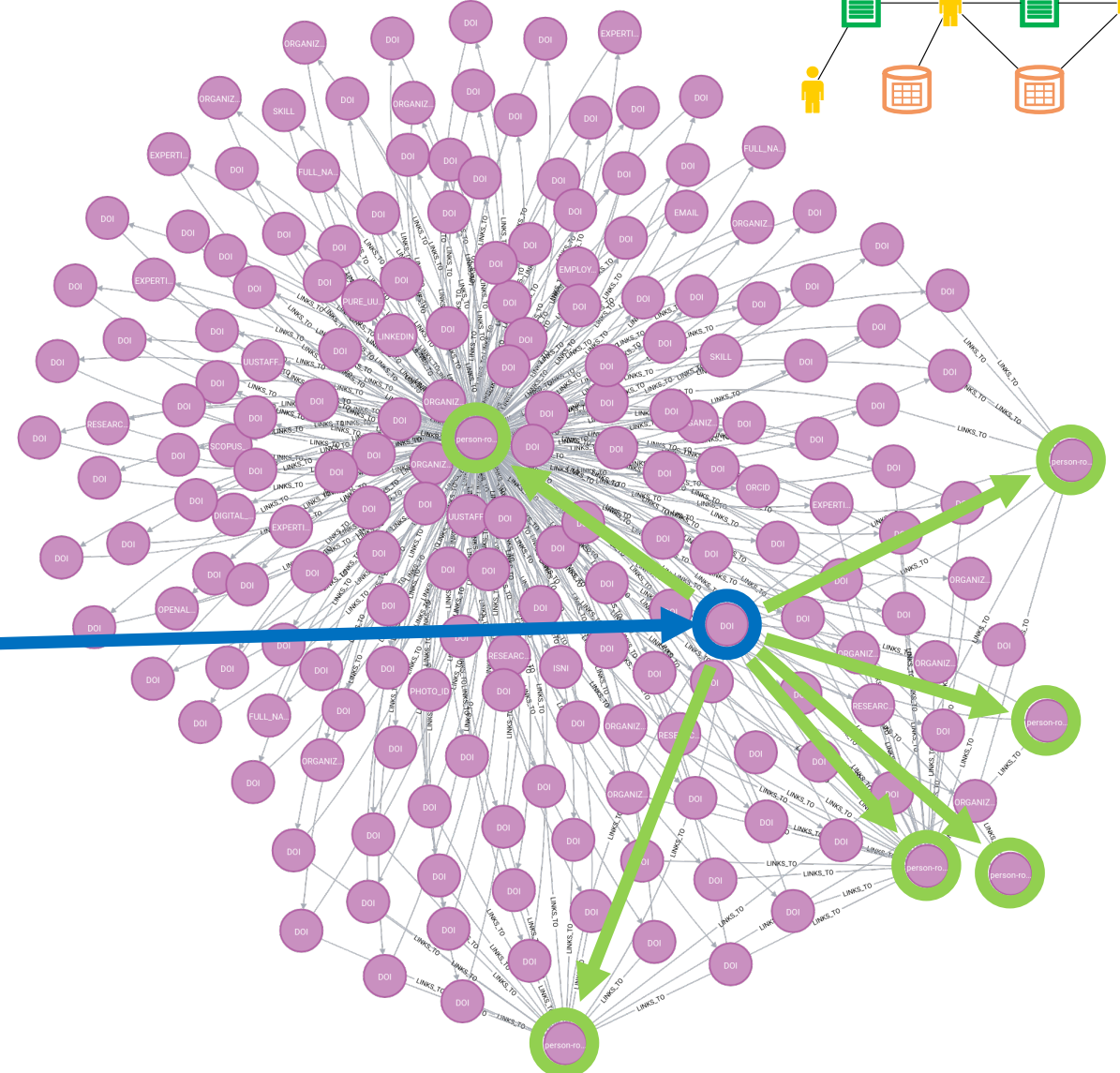
Visualization of a graph is not easy



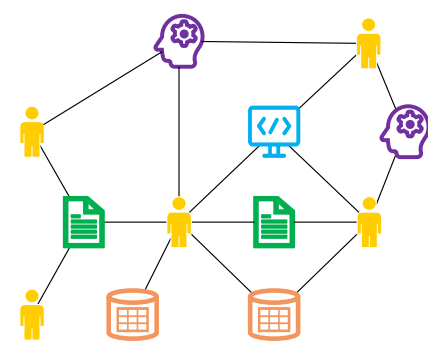
step 1



step 2: expand 1 researcher → 188 nodes



step 3: expand 1 publication → 6 nodes



Can be modified depending on your use case



Utrecht
University

Home

Broad search

Advanced search

REST API doc

Click for information about your search

Rigra Explorer found item:

name ▲▼	category ▲▼	value ▲▼	name ▲▼	comment ▲▼	year ▲▼	url_main	url_other	_source	_history
FULL_NAME	person	van Sebille, E.						• Pure-UU	Click for history

Histogram

This is personal information related to this person:

EXPERTISE_AREA (5)

RESEARCH_AREA (4)

FULL_NAME (3)

SKILL (2)

OPENALEX (1)

LINKEDIN (1)

PHOTO_ID (1)

EMAIL (1)

UUSTAFF_ID_PERS (1)

UUSTAFF_PAGE_ID (1)

PURE_UUID_PERS (1)

ORCID (1)

ISNI (1)

SCOPUS_AUTHOR_ID (1)

DIGITAL_AUTHOR_ID (1)

EMPLOYEE_ID (1)

There are 26 rows in this tabbed table.

List of EXPERTISE_AREAS:

name ▲▼	category ▲▼	value ▲▼	comment ▲▼	year ▲▼	url_main	url_other	_source	_history
EXPERTISE_AREA	competence	Science Communication			url_main link		• UU staff pages	Click for history
EXPERTISE_AREA	competence	Open Science			url_main link		• UU staff pages	Click for history
EXPERTISE_AREA	competence	Ocean Circulation			url_main link		• UU staff pages	Click for history
EXPERTISE_AREA	competence	Marine Debris			url_main link		• UU staff pages	Click for history
EXPERTISE_AREA	competence	Climate Dynamics			url_main link		• UU staff pages	Click for history

There are 5 rows in this table.

There are 26 rows in this tabbed table.

Filter on "name"

☒ DOI (147)
 ☒ ORGANIZATION_NAME (14)

Filter on "category"

☒ journal article (58)
 ☒ preprint (39)
 ☒ review (18)
 ☒ organization (14)
 ☒ data set (13)
 ☒ book chapter (11)
 ☒ other contribution (4)
 ☒ book (2)
 ☒ software (1)
 ☒ conference article (1)

refresh

Histogram on "name"

Histogram on "category"

This is other information related to this person:

DOI (147)

RESEARCH_AREA (4)

FULL_NAME (3)

SKILL (2)

OPENALEX (1)

LINKEDIN (1)

PHOTO_ID (1)

EMAIL (1)

UUSTAFF_ID_PERS (1)

UUSTAFF_PAGE_ID (1)

PURE_UUID_PERS (1)

ORCID (1)

ISNI (1)

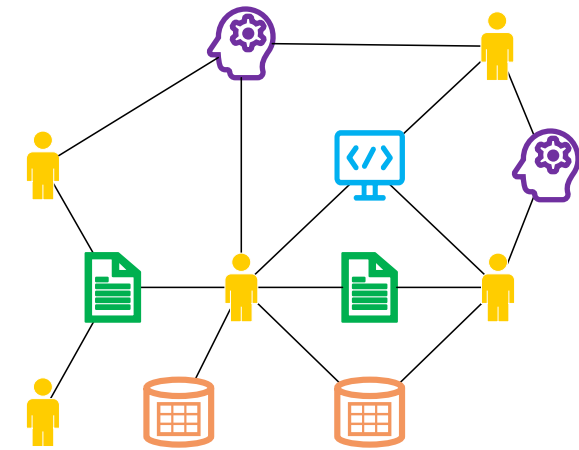
SCOPUS_AUTHOR_ID (1)

DIGITAL_AUTHOR_ID (1)

EMPLOYEE_ID (1)

There are 161 rows in this table.

name ▲▼	category ▲▼	value ▲▼	comment ▲▼	year ▲	url_main	url_other	_source	_history
DOI	preprint	10.1002/essoar.10512397.5	Impact impact of Tidal Forcing Tidal Forcing on Surface Particle Transport Properties: Insights from Twin Ocean SimulationsSurface Particle Transport1 Properties: Insights from Twin Ocean Simulations	2024	url_main link		• OpenAlex-UU	Click for history
DOI	preprint	10.1002/essoar.10512397.4	Effects of tide induced dynamics on surface transport properties	2024	url_main link		• OpenAlex-UU	Click for history
DOI	journal article	10.1080/1461670x.2024.2409836	Journalism Versus Churnalism: How News Factors in Press Releases Affect Journalistic Processing of Ocean Plastic Research in Newspapers Globally	2024	url_main link		• OpenAlex-UU	Click for history
DOI	preprint	10.22541/essoar.170365322.22869313/v3	Disentangling Carbon Concentration Changes Along Pathways of North Atlantic Subtropical Mode Water	2024	url_main link		• OpenAlex-UU	Click for history
DOI	preprint	10.22541/essoar.172408257.70342970/v1	Stability Bias in Lagrangian Backtracking in Divergent Flows	2024	url_main link		• OpenAlex-UU	Click for history
DOI	preprint	10.22541/essoar.172372980.07264354/v1	Separation timescales of vertically migrating zooplankton and other (a)biotic materials in the Benguela system	2024	url_main link		• OpenAlex-UU	Click for history
DOI	preprint	10.5194/egusphere-2024-1596	Possible provenance of IRD by tracing late Eocene Antarctic iceberg melting using a high-resolution ocean model	2024	url_main link		• OpenAlex-UU	Click for history
DOI	preprint	10.5194/egusphere-2024-1649	Designing and evaluating a public engagement activity about sea level rise	2024	url_main link		• OpenAlex-UU	Click for history
DOI	preprint	10.22541/essoar.170365322.22869313/v2	Disentangling Carbon Concentration Changes Along Pathways of North Atlantic Subtropical Mode Water	2024	url_main link		• OpenAlex-UU	Click for history
DOI	preprint	10.5194/egusphere-2024-1002	Non-negligible impact of Stokes drift and wave-driven Eulerian currents on simulated surface particle dispersal in the Mediterranean Sea	2024	url_main link		• OpenAlex-UU	Click for history
DOI	preprint	10.5194/egusphere-2024-13046	Non-negligible impact of Stokes drift and wave-driven Eulerian currents on simulated surface particle dispersal in the Mediterranean Sea	2024	url_main link		• OpenAlex-UU	Click for history
DOI	preprint	10.5194/egusphere-2024-543	The (non)effect of personalization in climate texts on credibility of climate scientists	2024	url_main link		• OpenAlex-UU	Click for history
DOI	review	10.5194/egusphere-2023-2730-ac2	Reply on RC2	2024	url_main link		• OpenAlex-UU	Click for history
DOI	software	10.5281/zenodo.823561	Parcels	2024	url_main link	url_other link	• Research Software Directory-UU	Click for history
DOI	data set	10.24416/uui01-05b2at	Code and data for "Disentangling Carbon Concentration Changes Along Pathways of North Atlantic Subtropical Mode Water"	2024	url_main link		• Yoda-DataCite	Click for history
DOI	data set	10.24416/uui01-0c0b8	Global Marine Plastic Mass Budget	2024	url_main link		• Yoda-DataCite	Click for history
DOI	journal article	10.12688/openreseurope.16913.2	Modelling drift of cold-stunned Kemp's ridley turtles stranding on the Dutch coast	2024	url_main link	url_other link	• OpenAlex-UU • Pure-UU	Click for history
DOI	journal article	10.5194/eg-7-201-2024	The (non)effect of personalization in climate texts on the credibility of climate scientists	2024	url_main link	url_other link	• Pure-UU	Click for history
DOI	journal article	10.1029/2023gc020814	Disentangling Carbon Concentration Changes Along Pathways of North Atlantic Subtropical Mode Water	2024	url_main link	url_other link	• OpenAlex-UU • Pure-UU	Click for history
DOI	journal article							



Links

- Websites: www.ricgraph.eu and docs.ricgraph.eu
- Reference publication: Rik D.T. Janssen (2024). *Ricgraph: A flexible and extensible graph to explore research in context from various systems*. SoftwareX, 26(101736). <https://doi.org/10.1016/j.softx.2024.101736>
- Rik D.T. Janssen (2025). *Utilizing Ricgraph to gain insights into research collaborations across institutions, at every organizational level*. [preprint]. <https://doi.org/10.2139/ssrn.5524439>.
- GitHub (software): <https://github.com/UtrechtUniversity/ricgraph>
- Zenodo: <https://doi.org/10.5281/zenodo.7524314>
- BackToPure: <https://github.com/UtrechtUniversity/BackToPure>

More information, presentations, demos, install workshops:



Utrecht
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