

Visualising COVID-19 Research Graph using ORCID

Dr Amir Aryani, Swinburne University of Technology

<https://orcid.org/0000-0002-4259-9774>

Melroy Almeida, Australian Access Federation

<https://orcid.org/0000-0003-3522-7849>

Dr Jingbo Wang, National Computational Infrastructure

<https://orcid.org/0000-0002-3594-1893>

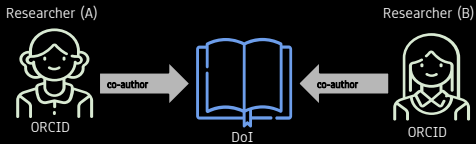


Building collaboration network (using PIDs)

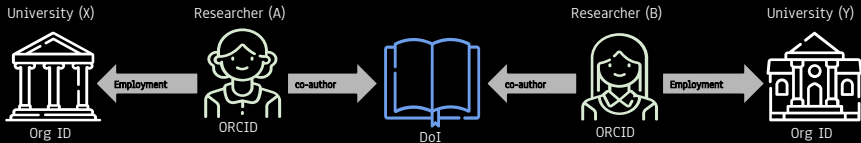


DoI

Building collaboration network (using PIDs)



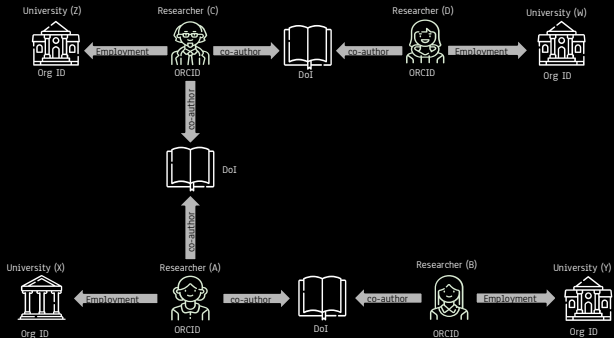
Building collaboration network (using PIDs)



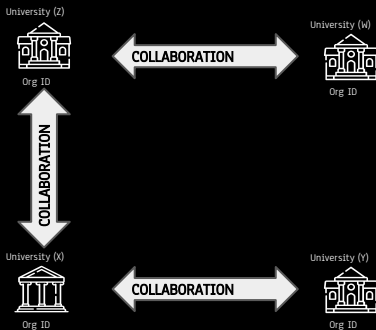
Building collaboration network (using PIDs)



Building collaboration network (using PIDs)



Building collaboration network (using PIDs)



3 Degrees of separation

Researcher - [:author] - Paper - [:author] - Researcher - [:Employee] - Institution

Researcher - [:co-creator] - Dataset - [:co-creator] - Researcher - [:Education] - Institution

Researcher - [:CI] - Grant - [:CI] - Researcher - [:Employee] - Institution

Institution → Country



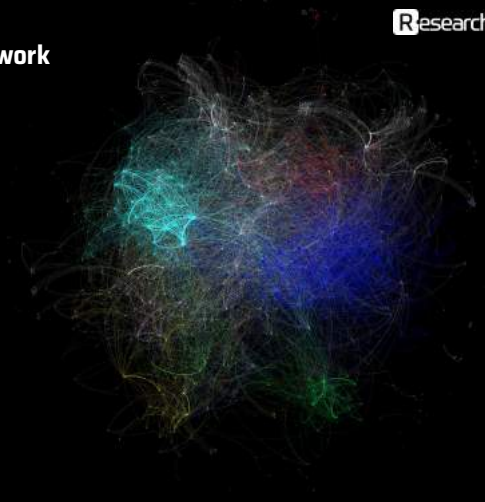
Researcher → Researcher → Institution → Country

Coronaviruses Collaboration Network

Dec 2009

1,685 Research Organisations

based on ORCID, and DOI links in April 2021



Coronaviruses Collaboration Network

Dec 2009

1,685 Research Organisations

based on ORCID, and DOI links in April 2021



Great Britain

United States

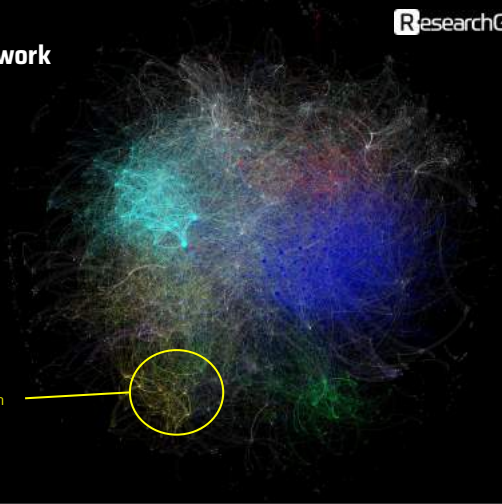
Coronaviruses Collaboration Network

Dec 2019

3,543 Research Organisations

based on ORCID, and DOI links in April 2021

Spain



Coronaviruses Collaboration Network

Feb 2020

10,162 Research Organisations

based on ORCID, and DOI links in April 2021

Brazil



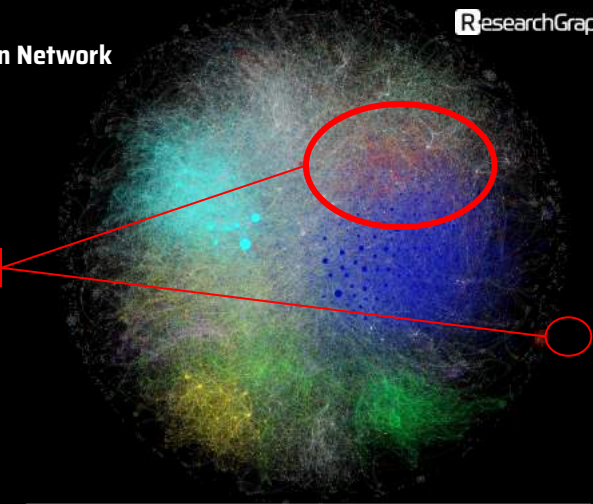
Coronaviruses Collaboration Network

April 2020

17,483 Research Organisations

based on ORCID, and DOI links in April 2021

China



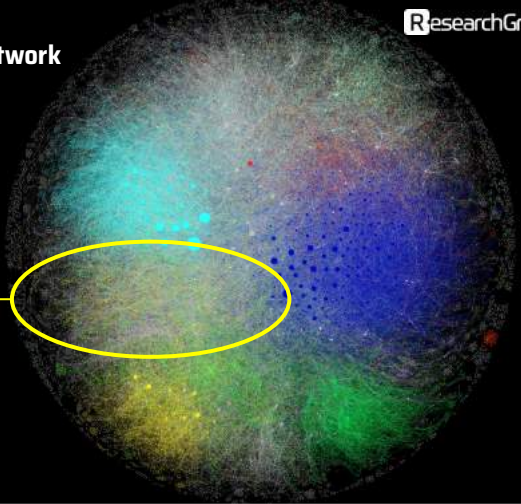
Coronaviruses Collaboration Network

June 2020

29,473 Research Organisations

based on ORCID, and DOI links in April 2021

Germany



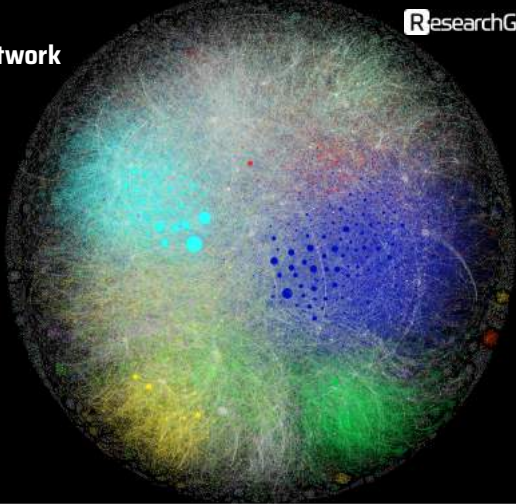
Coronaviruses Collaboration Network

Dec 2020

49,773 Research Organisations

based on ORCID, and DOI links in April 2021

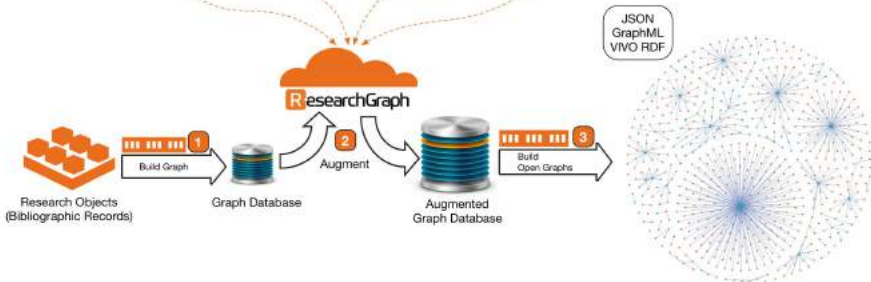
US	(11.42%)
BR	(6.55%)
IN	(6.54%)
GB	(5.36%)
IT	(4.23%)
ES	(4.23%)
CN	(3.58%)
FR	(2.88%)
DE	(2.5%)
AU	(1.75%)
PT	(1.72%)
RU	(1.64%)
TR	(1.51%)

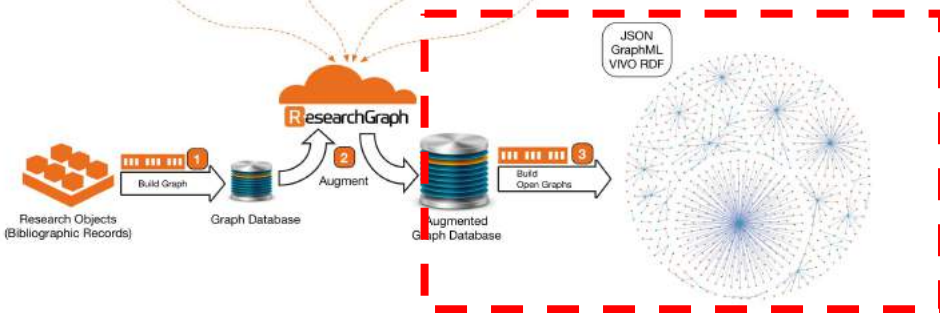


Impact of PIDs on COVID-19 Collaboration Network

Time	Data analysed in Sept 2020	Data analysed in Jan 2021	Data analysed in April 2021
Dec 2009	1301	1519	1685
Dec 2019	2777	3249	3543
Feb 2020	3596	9243	10162
Apr 2020	10384	15959	17483
Jun 2020	20961	27091	29473
Aug 2020	26065	35751	38491
Oct 2020		43026	45852
Dec 2020		46973	49773







Visualisation & Analytics



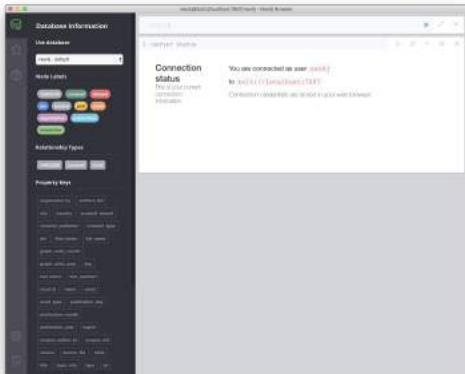
Visualisation & Analytics



To Access Azure VM, please contact Melroy Almeida (melroy.almeida@aaf.edu.au)

Neo4j

- Neo4j desktop
- Graph structure
- Cypher queries





<https://neo4j.com/docs/cypher-refcard/current/>

Graph Analytics

- Number of publications
- Number of organisations / year
::graph_entry_month
- Number of collaboration links between universities



<https://github.com/researchgraph/orcid-webinar-2021-demo>

How to get involved?

To access the VM, contact

Melroy Almeida (melroy.almeida@aaf.edu.au)



To access code:

<https://github.com/researchgraph/orcid-webinar-2021-demo>

