

OpenAIRE Graph Demystified: Find Your Optimal Access Pathway

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Which of these tools have you used? (Select all that apply)

 OpenAIRE Explore search portal

 APIs

 Datasets downloaded from Zenodo

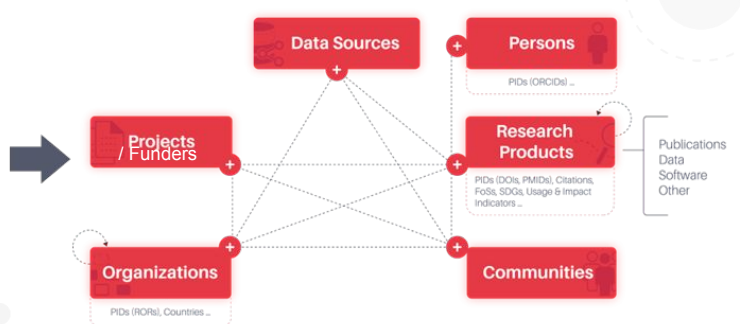
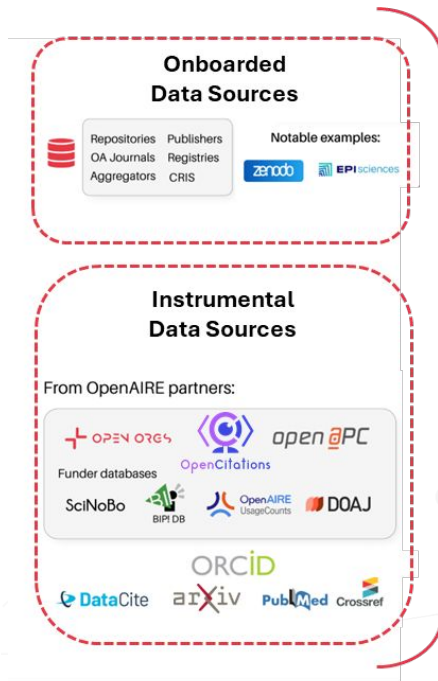
 Cloud Access via Google Big Query

 Customised Dashboards (CONNECT, MONITOR)

 None of the above



The **OpenAIRE Graph** provides a 360° view of research enabled by an interconnected ecosystem of research results. All made possible by Open Science.

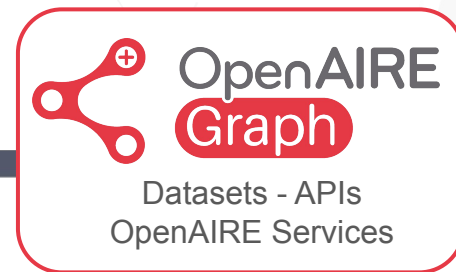


Scholarly Knowledge Graph

Every Month: rigorous **aggregation - enrichment**
- deduplication workflow

Data model

<https://graph.openaire.eu/docs/data-model/>



 graph.openaire.eu

Monthly provision

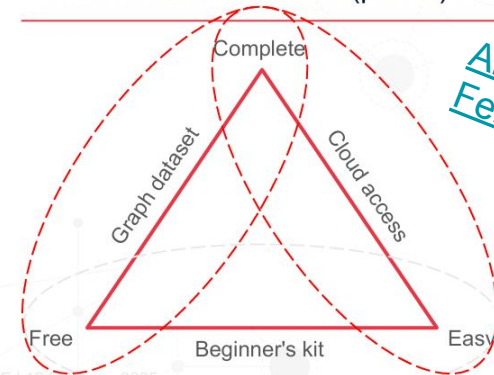
- [OpenAIRE Explore](#): web portal for online search
- Customised dashboards ([CONNECT](#), [MONITOR](#), [PROVIDE](#))
- [Open REST APIs](#)

UI vs JSON raw data

Semestral provision

- [OpenAIRE Graph datasets](#) on Zenodo
- [Beginner's kit](#)
- [Cloud Access](#)

Data access trilemma (pick 2)



*Andrea Mannocci
Feb '25 comm. call*


Live Demo

A faint, stylized network diagram is visible in the background. It consists of several circular nodes of varying sizes connected by thin lines. One node on the right is highlighted with a larger, semi-transparent circle and a plus sign inside. Another node in the lower-left is also highlighted with a semi-transparent circle.

Explore portal for online search

Finite-temperature transport in one-dimensional quantum lattice models

Publication >> Article, Journal • 2021 • Embargo end date: 01 Jan 2020 • Slovenia, Germany • Publisher: American Physical Society (APS) •
Funded by: NSF | Kavli Institute for Theor..., EC | QUANTMATT, EC | OMNES

Authors: *Tomaž Prosen*;  *Christoph Karrasch*;  *Robin Steinigeweg*;  *Fabian Heidrich-Meisner*; +2 Authors

DOI: [10.1103/revmodphys.93.025003](https://doi.org/10.1103/revmodphys.93.025003) , [10.48550/arxiv.2003.03334](https://doi.org/10.48550/arxiv.2003.03334)  HANDLE: [20.500.12556/RUL-126996](https://hdl.handle.net/20.500.12556/RUL-126996) 

The last decade has witnessed an impressive progress in the theoretical understanding of transport properties of clean, one-dimensional quantum lattice systems. Many physically relevant models in one dimension are Bethe-ansatz integrable, includir

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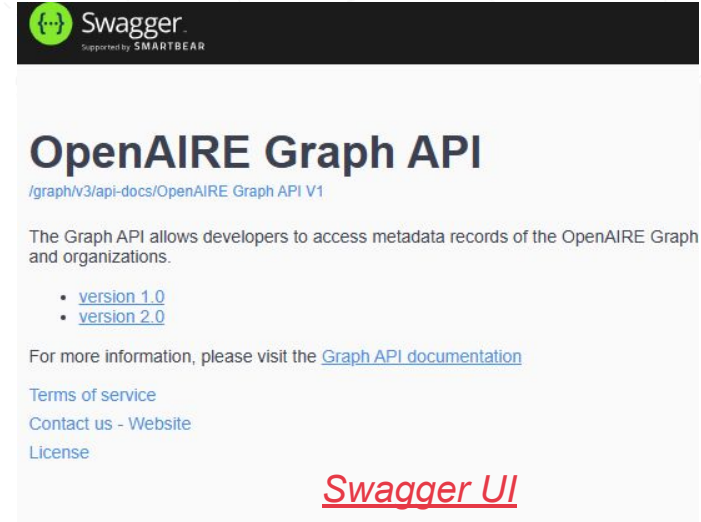
RESTful Architecture – OpenAPI-based HTTP endpoints for seamless integration

- Authenticated: Up to 7200 requests/hour
- Unauthenticated: Up to 60 requests/hour

Structured Data – JSON responses.

Powerful Search & Filtering – Query by keywords, funders, organisations, publication types, OA status, and more.

Entity Relationships – Retrieve linked data across publications, datasets, software, and projects.



Swagger
Supported by SMARTBEAR

OpenAIRE Graph API

/graph/v3/api-docs/OpenAIRE Graph API V1

The Graph API allows developers to access metadata records of the OpenAIRE Graph and organizations.

- [version 1.0](#)
- [version 2.0](#)

For more information, please visit the [Graph API documentation](#)

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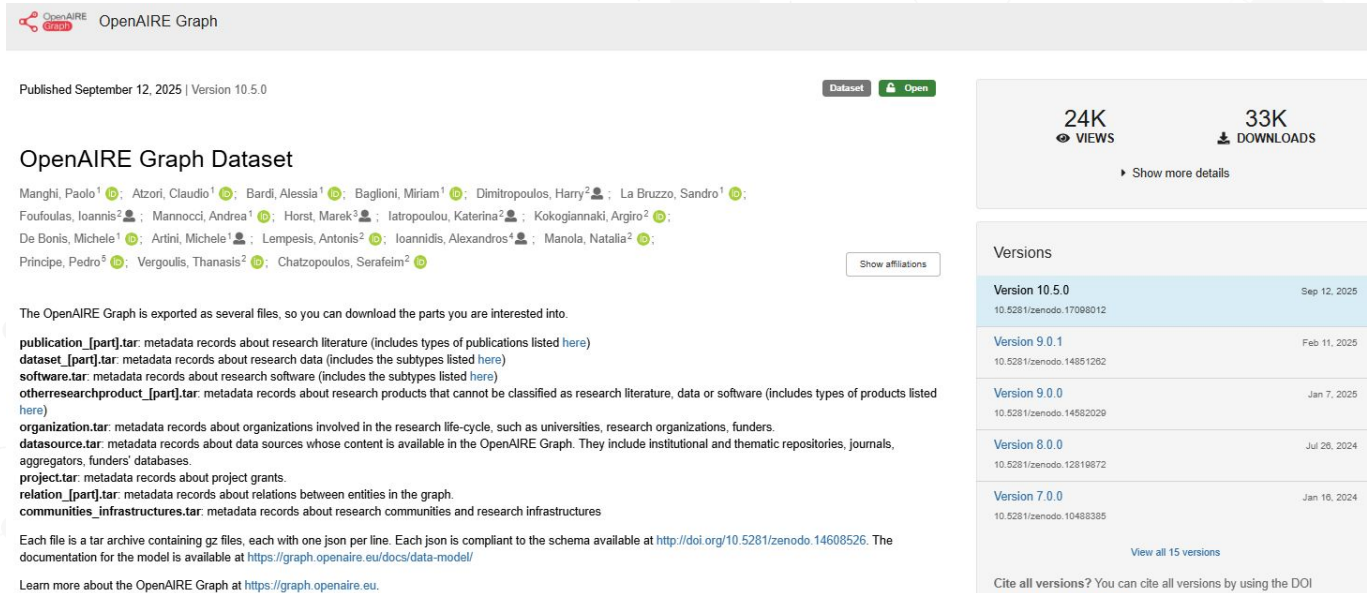
Download: <https://graph.openaire.eu/docs/downloads/full-graph>

✓ Use if:

- Need full control over data and custom preprocessing
- Have technical skills to process raw JSON data
- Have sufficient computational resources

✗ Do Not Use if:

- Prefer not to work with raw data
- Only have access to a local machine



The screenshot shows the OpenAIRE Graph Dataset page. At the top, it says "OpenAIRE Graph" and "Published September 12, 2025 | Version 10.5.0". Below this, the title "OpenAIRE Graph Dataset" is followed by a list of authors: Manghi, Paolo¹; Alzori, Claudio¹; Bardi, Alessia¹; Baglioni, Miriam¹; Dimitropoulos, Harry²; La Bruzzo, Sandro¹; Fouloulas, Ioannis²; Mannocci, Andrea¹; Horst, Marek²; Iatropoulou, Katerina²; Kokogiannaki, Argiro²; De Bonis, Michele¹; Artini, Michele¹; Lempesis, Antonis²; Ioannidis, Alexandros⁴; Manola, Natalia²; Principe, Pedro²; Vergoulis, Thanasis²; Chatzopoulos, Serafeim². There are buttons for "Dataset" and "Open". A "Show affiliations" button is also present. Below the authors, it states: "The OpenAIRE Graph is exported as several files, so you can download the parts you are interested into." This is followed by a list of file types and their descriptions: **publication_[part].tar**: metadata records about research literature (includes types of publications listed [here](#)); **dataset_[part].tar**: metadata records about research data (includes the subtypes listed [here](#)); **software.tar**: metadata records about research software (includes the subtypes listed [here](#)); **otherresearchproduct_[part].tar**: metadata records about research products that cannot be classified as research literature, data or software (includes types of products listed [here](#)); **organization.tar**: metadata records about organizations involved in the research life-cycle, such as universities, research organizations, funders; **datasource.tar**: metadata records about data sources whose content is available in the OpenAIRE Graph. They include institutional and thematic repositories, journals, aggregators, funders' databases; **project.tar**: metadata records about project grants; **relation_[part].tar**: metadata records about relations between entities in the graph; **communities_infrastructures.tar**: metadata records about research communities and research infrastructures. It then states: "Each file is a tar archive containing gz files, each with one json per line. Each json is compliant to the schema available at <http://doi.org/10.5281/zenodo.14608526>. The documentation for the model is available at <https://graph.openaire.eu/docs/data-model/>. Learn more about the OpenAIRE Graph at <https://graph.openaire.eu>." On the right side, there are statistics: "24K VIEWS" and "33K DOWNLOADS", with a "Show more details" link. Below this is a "Versions" section with a table of versions:

Version	Date
Version 10.5.0	Sep 12, 2025
Version 9.0.1	Feb 11, 2025
Version 9.0.0	Jan 7, 2025
Version 8.0.0	Jul 26, 2024
Version 7.0.0	Jan 16, 2024

 There is a "View all 15 versions" link. At the bottom, it says: "Cite all versions? You can cite all versions by using the DOI".



Download: <https://graph.openaire.eu/docs/downloads/beginners-kit>

✓ Use to:

- Familiarise with data and tools on your local machine
- Scale up later

⚠ Small subset of data

notebooks	updated queries	7 months ago
Dockerfile	bumping Docker version	7 months ago
README.md	removed flag preventing restart of the docker container	10 months ago
log4j2.properties	restoring missing log4j file	last year
requirements.txt	bumped spark version, fixed docker file	10 months ago

README

OpenAIRE Graph Beginner's Kit

This beginner's kit runs entirely in a Docker container so as to minimise the effort required to get started and the amount of software packages and frameworks to be installed. Docker Engine is the only piece of software required.

Prerequisites

Install Docker Engine from <https://www.docker.com>.

Please, double-check that Docker has been given an adequate space for containers by checking under Settings -> Resources -> Virtual Disk limit. In our tests, we set this parameter to **64 GB**. For the sake of completeness, our default configuration was set to 8 CPUs, 8 GB memory, and 1 GB swap.

How to build

First, `git clone` this repository, then open a Terminal window and get inside the cloned folder.

Once you are in position, run the following command

```
docker build --rm -t openaire-beginners-kit .
```





OpenAIRE
Graph

Cloud Access

Full OpenAIRE Graph dataset (semestral release) on Google Cloud can be accessed and queried from Google BigQuery.

New Improved documentation and Use-Case Packages

<https://graph.openaire.eu/docs/cloud-access/>



OpenAIRE AMKE covers expenses for data storage on Google Cloud; however, expenses due to data processing (e.g., filtering and aggregating the data) are on individual resources.

Email

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Graph Portal

<https://graph.openaire.eu/>

User Forum

<https://openaire.flarum.cloud/>

Support

<https://graph.openaire.eu/helpdesk>

THANKS