

# Automating repository workflows with Orpheus

An Open Source database of journals and publishers

André Sartori

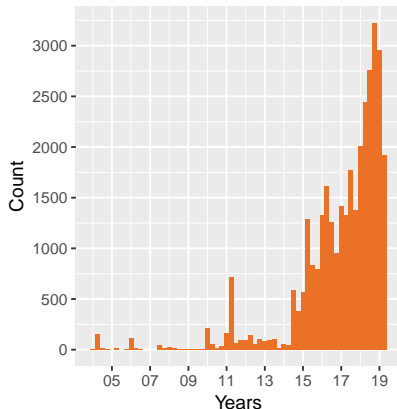
Office of Scholarly Communication, University of Cambridge, UK

# The problems:

Increased demand for our services

- ▶ Usage of the Cambridge institutional repository (Apollo) has been increasing substantially since the announcement of the Open Access policy for REF2021.
- ▶ Staffing levels have not increased at the same rate.
- ▶ Thus, forcing our team to work **smarter**, not only harder.

Quarterly deposits in Apollo  
Articles and conference proceedings



# The problems:

Frustration in repeatedly looking up journals' attributes

- ▶ Our team members were spending much time repeatedly looking up journals':
  - ▶ Self-archiving policies
  - ▶ Article processing charges
  - ▶ Available licences
  - ▶ Inclusion in institutional agreement
  - ▶ Participation in EuropePMC
  - ▶ etc. . .

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- ▶ Much of this information is available in a structured format from:
  - ▶ Elsevier

## ELSEVIER

### Journal Specific Embargo Periods

The following journal-specific embargo periods are only applicable for UK researchers who wish to self-archive their **accepted manuscript**. They apply to those who are a grant recipient from:

- One of the members of Research Councils UK and whose article was published from 1st April 2013.
- Wellcome Trust, subject to the Wellcome Trust's open access policy and whose article was published in subscription journal before 1st April 2013, but posted after this date.
- UK researchers complying with the Higher Education Funding Council for England (HEFCE) open access policy through the green open access route.

These embargo periods reflect the broader UK open access policy environment that was developed collaboratively among publishers, funding bodies and universities among other stakeholders. The UK Government have expressed a preference for gold open access and support license extensions. Green open access (manuscript posting) is just one component of the UK open access landscape. As such, adapted embargo periods apply for UK researchers. For those institutions and funders whose sole approach is green open access we use longer and more differentiated embargo periods.

Additional information:

[See our sharing guidelines for details about when embargos apply.](#)

[Click here for a list of institutions and funders with which Elsevier has formal agreements](#)

Please note: Elsevier embargo periods are under regular revision and so are subject to change.

| ISSN      | Journal Name                          | Embargo Period (months) |
|-----------|---------------------------------------|-------------------------|
| 1876-2859 | Academic Pediatrics                   | 12                      |
| 1076-6332 | Academic Radiology                    | 12                      |
| 0001-4575 | Accident Analysis & Prevention        | 12                      |
| 0155-9982 | Accounting Forum                      | 18                      |
| 0361-3682 | Accounting, Organizations and Society | 24                      |
| 0094-5765 | Acta Astronautica                     | 12                      |
| 1874-1029 | Acta Automatica Sinica                | 18                      |
| 1742-7061 | Acta Biomaterialia                    | 12                      |
| 0122-7262 | Acta Colombiana de Cuidado Intensivo  | 12                      |
| 1872-2032 | Acta Ecologica Sinica                 | 18                      |
| 0001-5814 | Acta Haematologica Polonica           | 12                      |
| 0065-1281 | Acta Histochemica                     | 12                      |
| 1359-6454 | Acta Materialia                       | 12                      |
| 0252-9602 | Acta Mathematica Scientia             | 12                      |
| 0894-9166 | Acta Mechanica Solida Sinica          | 12                      |
| 1146-609X | Acta Oecologica                       | 12                      |



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  - ▶ Wiley

The screenshot shows the Wiley Author Compliance Tool interface. At the top, the Wiley logo is on the left, and navigation links (HOME, MY DASHBOARD, AUTHORS, REVIEWERS, EDITORS, HELP) and a search bar are on the right. Below the navigation bar, the breadcrumb trail reads: Author Resources > Journal Authors > Open Access > Author Compliance Tool. A left sidebar contains a tree view of 'Author Resources' with 'Open Access' selected. The main content area has tabs for 'Find journal', 'Prepare', 'Submission & Peer Review', 'Licensing', 'Open Access' (active), 'Publication', and 'Promotion'. The 'Open Access' tab displays 'How to comply with open access policies' with a sub-header 'Open Access' and a link 'Curious about open access? Learn more here.' Below this is the 'Author Compliance Tool' with dropdown menus for 'Select funder...' and 'Select institution...'. The tool is divided into three sections: 'Gold Open Access (Paid open access option)', 'Green Open Access (Self-Archiving)', and 'Data Sharing Policy'. Each section has a table with columns for 'Policy', 'Funder', 'Institution', and 'Journal'. The 'Gold Open Access' section includes a 'License' dropdown and an 'APC' field. The 'Green Open Access' section includes a 'Repository' dropdown and a 'Submitted Version' dropdown. The 'Data Sharing Policy' section includes a 'Repository' dropdown. The 'Preprints Policy' section is partially visible at the bottom.

**WILEY** HOME MY DASHBOARD AUTHORS REVIEWERS EDITORS HELP

Author Resources > Journal Authors > Open Access > Author Compliance Tool

Find journal Prepare Submission & Peer Review Licensing **Open Access** Publication Promotion

### How to comply with open access policies

Wiley makes it easy to ensure compliance with your funder and/or institution mandates.

Select your funder or institution below, then select your journal of choice to see if its policies comply with the policies of your funder or institution.

**Open Access**  
Curious about open access? Learn more here.

#### Author Compliance Tool

Select funder...  
Select institution...  
Acta Paediatrica

#### Gold Open Access (Paid open access option)

|                 | Funder          | Institution           | Journal  |
|-----------------|-----------------|-----------------------|--|
| <b>Policy:</b>  | Select a funder | Select an institution | Offers OnlineOpen view policy<br>Choice of CC BY-NC or CC BY-NC-ND<br>CC BY for mandated authors |
| <b>License:</b> |                 |                       | \$3,000<br>More info   |
| <b>APC:</b>     |                 |                       |  |

Select a funder to see if they have a Wiley Open Access Account  
Select an institution to see if they have a Wiley Open Access Account

#### Green Open Access (Self-Archiving)

|                           | Funder          | Institution           | Journal                        |
|---------------------------|-----------------|-----------------------|--------------------------------|
| <b>Policy:</b>            | Select a funder | Select an institution | Standard Policy<br>View policy |
| <b>Repository:</b>        |                 |                       | —                              |
| <b>Submitted Version:</b> |                 |                       | On submission                  |
| <b>Accepted Version:</b>  |                 |                       | 12mo embargo                   |

#### Data Sharing Policy

|                    | Funder          | Institution           | Journal                   |
|--------------------|-----------------|-----------------------|---------------------------|
| <b>Policy:</b>     | Select a funder | Select an institution | Encouraged<br>View policy |
| <b>Repository:</b> |                 |                       | —                         |

#### Preprints Policy

## Frustration in repeatedly looking up journals' attributes

- [illegible]

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  - ▶ Wiley
  - ▶ Springer (Compact agreement)
  - ▶ EuropePMC
  - ▶ etc. . .

The screenshot shows the Europe PMC website. At the top, there's a navigation bar with links: About, Tools, Developers, Help, and a sign-in/registration link. Below this is a search bar with the text "Search worldwide, life-sciences literature" and a "Search" button. A dropdown menu is open, showing "journal list" as the selected option. Other options in the menu include "Tools overview", "ORCID article claiming", "Grant finder", "External links service", "RSS feeds", "SciLife annotations", and "Annotations submission Service".

## Journal list

Search for journals

\* Hide predecessor titles    ☐ Show predecessor titles    [Download CSV](#)    [Legend](#)

| ISSN      | Title  | Volumes in PMC         |              | Free Access          | Participation Level            |
|-----------|--|------------------------|--------------|----------------------|--------------------------------|
|           |  | Latest                 | First        |                      |                                |
| 1550-7416 | <a href="#">The AAPS Journal</a> (v.1;1999)          | v.18(3)<br>May 2016    | v.6<br>2004  | ☐☐                   | No longer participating (Full) |
| 1530-9932 | <a href="#">AAPS PharmSciTech</a>                    | v.12(2)<br>Apr 2016    | v.1<br>2000  | ☐☐                   | No longer participating (Full) |
| 2374-2895 | <a href="#">Academic Pathology</a>                   | v.6<br>Jan-Dec 2019    | v.1<br>2014  | Immediate ☐          | Full                           |
| 2326-3253 | <a href="#">ACG Case Reports Journal</a>             | v.3<br>2018            | v.1<br>2013  | Immediate ☐          | Full                           |
| 2374-7943 | <a href="#">ACS Central Science</a>                  | v.3(5)<br>May 22, 2019 | v.1<br>2015  | Immediate ☐☐         | Full                           |
| 1948-7193 | <a href="#">ACS Chemical Neuroscience</a>            | v.5(8)<br>Aug 20, 2014 | v.1<br>2010  | ☐☐                   | No longer participating (Full) |
| 1948-5875 | <a href="#">ACS Medicinal Chemistry Letters</a>      | v.10(5)<br>May 9, 2019 | v.1<br>2010  | 12 months or less ☐☐ | Full                           |
| 0392-4203 | <a href="#">Acta Bio Medica - Atenel Parmensis</a>   | v.90(1)<br>2019        | v.88<br>2017 | Immediate ☐          | Full                           |
| 1672-9145 | <a href="#">Acta Biochimica et Biophysica Sinica</a> | v.51(4)                | v.41         | 12 months ☐☐         | NIH Portfolio                  |

# Our solution

Import all those datasets into a database that can then feed **machine-readable data** to our repository and supporting systems.



# Orpheus

- ▶ Django application
  - ▶ postgresSQL backend
  - ▶ web frontend for users and editors
  - ▶ web frontend for administrators
  - ▶ API (JSON response)
- ▶ Collection of python parsers for bulk importing and updating journal data from numerous sources.



Orpheus

# Impact

Initial bulk data imports resulted in coverage of self-archiving policies for 60% of Cambridge outputs. Coverage has since increased to 80%.

## Time saving

An educated guess is that Orpheus now saves our team c. 14.5 person hours per week.

### Curation of embargo periods

Saving of 3 minutes per item to set and update embargos manually.

### Helpdesking

Saving of 5 minutes per item when advising on funder compliance.

I am also presenting a poster, so please come and say hello!



# Orpheus

## 1 What it is

Database of academic journals and their:

- Revenue model (Hybrid / Open Access)
- Article processing charges
- Self-archiving policy
- Europe PMC participation
- Contacts for queries
- and more...

## 2 What it does

- Aggregates information from:
  - Publishers
  - Databases (DOAJ, RoMEO, PMC)
- Stores data in a machine-readable format
- Has a RESTful API for easy integrations
- Keeps a history of superseded policies and attributes

Find out more:



## 3 What it looks like for

The screenshot shows four panels of the Orpheus interface. The 'Users & editors' panel displays a list of journals with columns for journal name, ISSN, and other metadata. The 'Administrators' panel shows a table of users with columns for name, email, and role. The 'Machines (API)' panel displays a list of API endpoints and their descriptions. The 'Developers' panel shows a list of API endpoints and their descriptions, including a section for 'Open Source (GPL 3.0)'.

## 4 Use it to empower your team

We have integrated Orpheus with our **helpdesk** and **deposit** systems to support our team members:

- Making decisions on whether or not to fund Open Access charges
- Advising researchers on complying with funders' requirements
- Deciding what version of an output can be deposited

The screenshot shows two panels of the Orpheus interface. The 'Helpdesk' panel displays a list of tickets with columns for ticket number, subject, and status. The 'Deposit system' panel shows a form for depositing a new item, with fields for title, author, and other metadata.

## 5 Or to automate your repository

Our Fast-Track Deposit System interacts with the Orpheus and Crossref APIs to automatically set embargo periods to items deposited in our institutional repository.

Learn more about Fast-Track:



Orpheus informs the embargo period of **80%** of items deposited in the Cambridge repository



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# Final thoughts, acknowledgements and contact

## Give Orpheus a go:

- ▶ Open Source (GPL 3.0 licence).
- ▶ Code and documentation:  
<https://github.com/osc-cam/orpheus>

## Contact

- ▶ André Sartori:
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  - ▶ +44 1223 333 065
- ▶ Open Access team at Cambridge:
  - ▶ [info@openaccess.cam.ac.uk](mailto:info@openaccess.cam.ac.uk)
  - ▶ @CamOpenAccess

## Many thanks to:

- ▶ The OSC team at Cambridge for feedback and support!  
<https://osc.cam.ac.uk/about-us>
- ▶ The Orpheus board of editors:
  - ▶ Maria Angelaki
  - ▶ Mélodie Garnier
  - ▶ Phillipa Grimstone
  - ▶ Debbie Hansen
  - ▶ Tony Malone
  - ▶ Arthur Smith
  - ▶ Elena Varela-Fuentes