Céline Barthonnat
Raphaël Tournoy

Episciences

Diamond open access publishing
with Overlay journals

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open science

CCSD
Centre pour la Communication
Scientifique Directe

EPIsciences
overlay journals

sciencesCONF
conference management

cnrs

Inría
inventors for the digital world

INRAe

What is Episciences?

- Platform for publishing OA scientific journals
  - Any disciplines
  - New or flipping journals
- Scientific communities can create and operate high-quality OA journals
- Diamond open access (free to both authors and readers)
  - A mix of:
    - Gold Open Access (OA journals)
    - Green Open Access (self-archiving in OA repository)
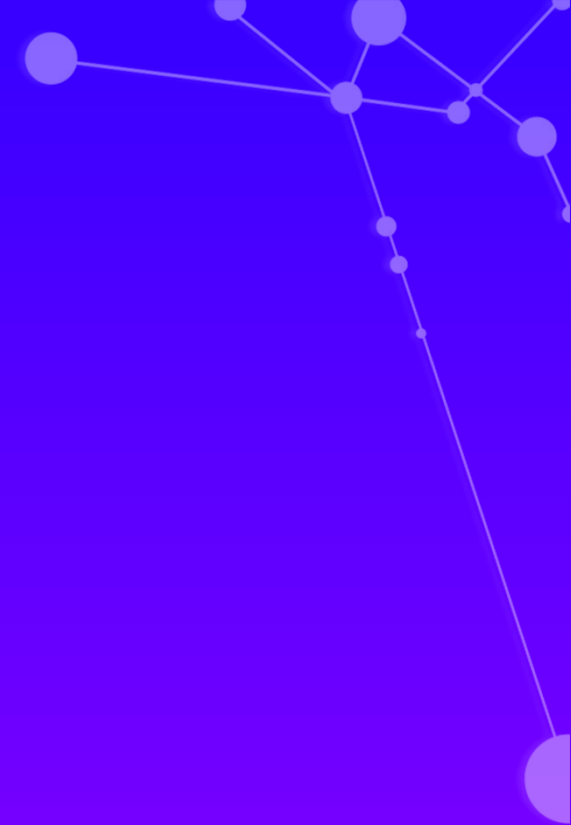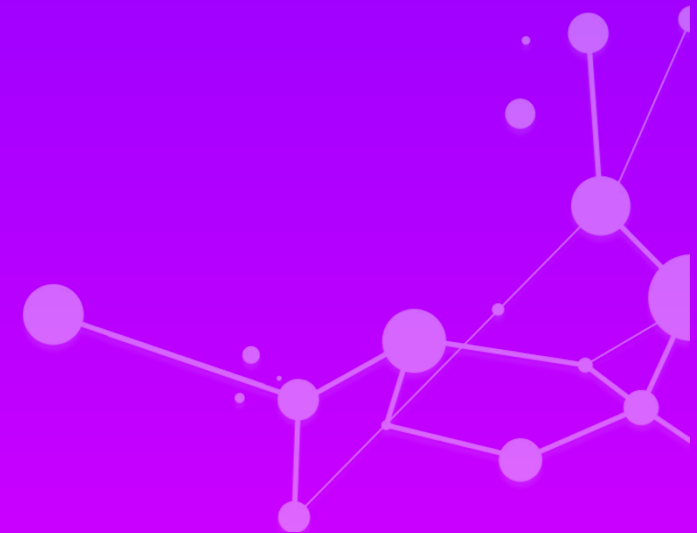
An overlay (`epi`) journal model

- Operating on top of OA repositories e.g. <u>HAL</u>, <u>arXiv</u>, <u>Zenodo</u>, ...

- Peer-review preprints
  - single-blind review
  - open peer-review

- All versions are always available online
  - During the whole publication process
  - If the journals disappears or moves
  - Updates on still possible on journal/archive

The idea was proposed to the CCSD in 2003
by Professor Jean-Pierre Demailly, a mathematician

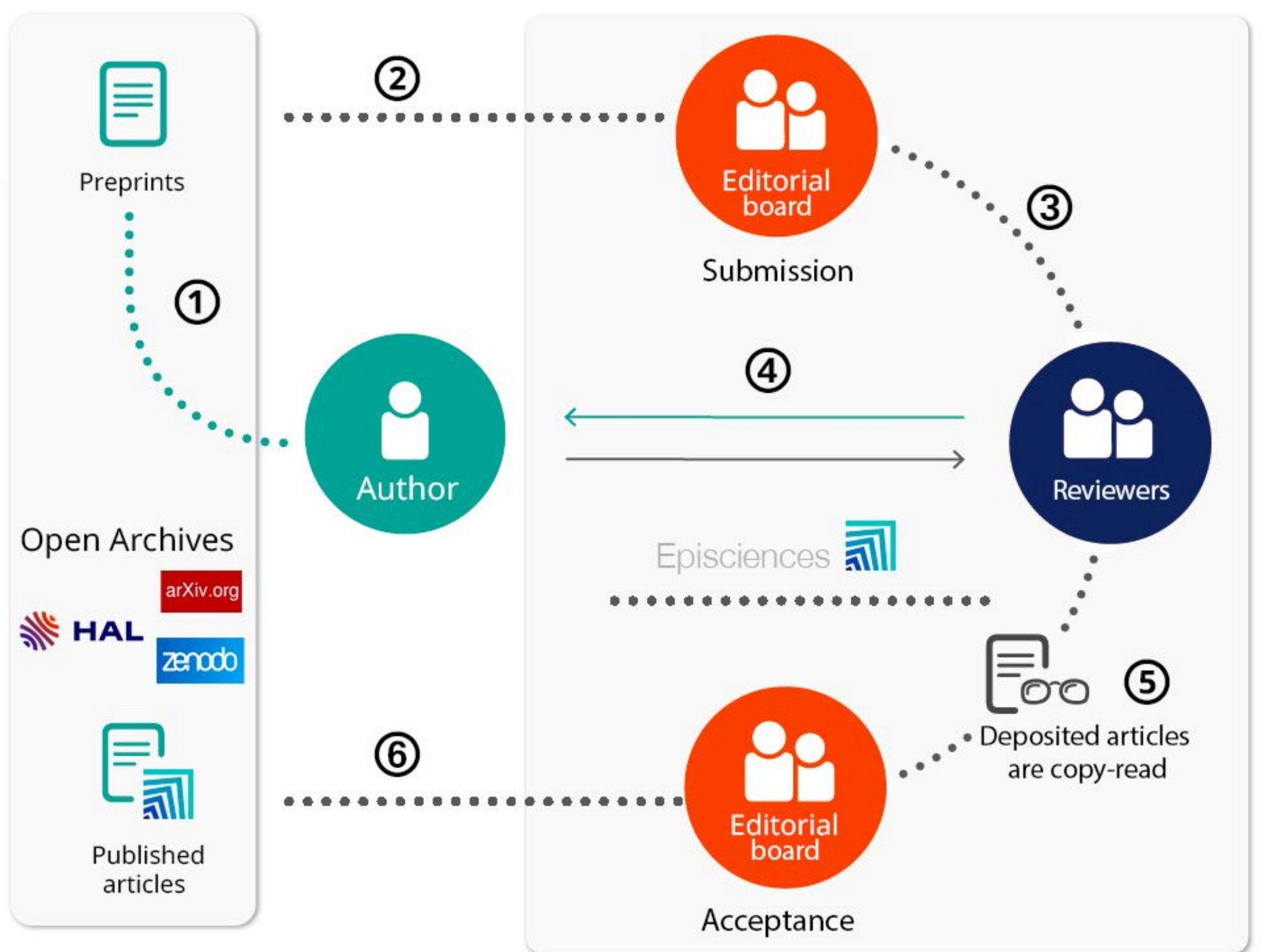English [edit]

Etymology [edit]

From Ancient Greek ἐπί (*epí*, "on top of").

Prefix [edit]

epi-

1. Above, over, on, in addition to
2. (*chemistry*) Denotes an epimeric form

Workflow

Episciences organisation

- The **steering committee** review general platform orientations and epi-committees

- **Epi-committees** select new journals in their disciplines
  - EpiIAM
  - EpiMaths
  - EpiSSH

- **Editorials Committees** organise
  - evaluation and scientific discussion
  - peer-reviewing
  - copy-editing
  - publication

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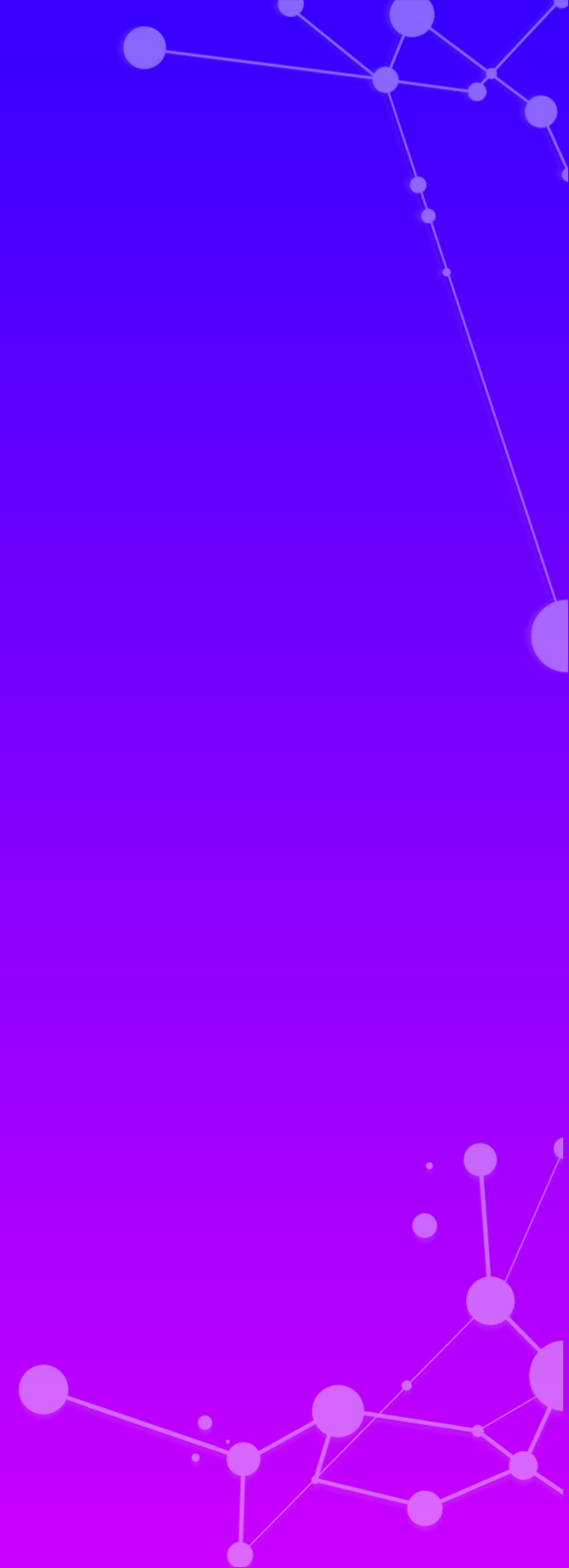
Episciences for the scientific communities

Reducing costs

- No subscriptions, no APC, free hosting and support
- Publish at a reasonable cost (shared infrastructure, hosting and preservation by repositories)
- Reinvesting public money (HR) in a public service for scientific dissemination

Adding value to AO

- Validation/certification of preprints

Reduce time to access publications

- Preprints are immediately available
- Stay online, even if refused

Episciences for the scientific communities

Traceability

- Track the evolution of document versions, even after publication
- Consider publications as a conversation flow, beyond a simple published version

Open by design

- Compliant with open access mandates

Allow authors to retain their rights

- CC licences, non-exclusive distribution rights to journals

Episciences for the scientific communities

Long term access

- Maintain control over access to publications/ evaluations
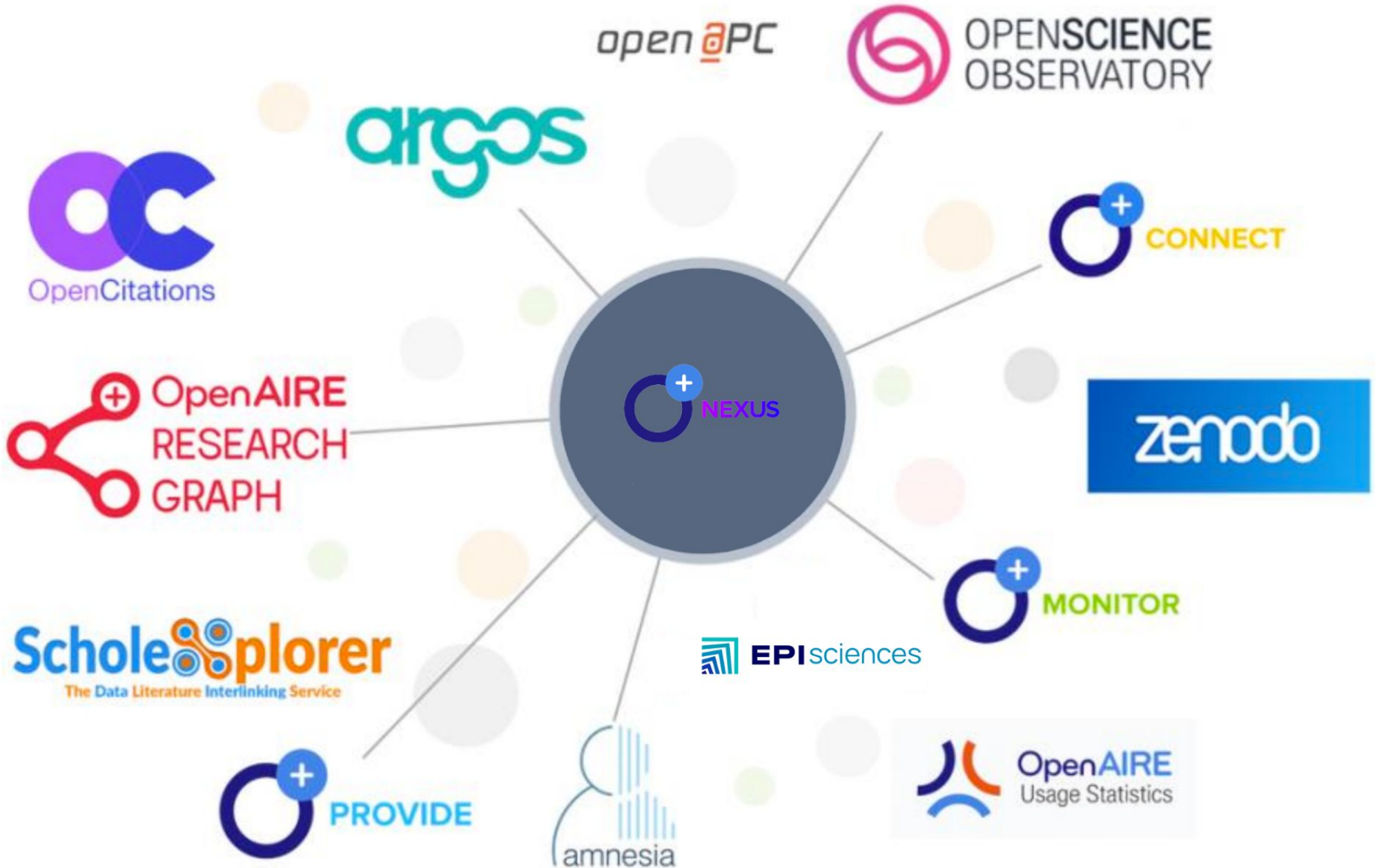- Maintain access to content even if the journal ceased publication

Scientific independence

- Allow scientific communities to own their journals and the data created by their activity
- To have a scientific publication policy independent of a commercial logic

FAIR & Bibliodiversity
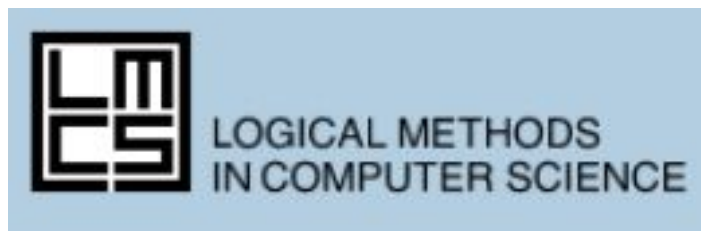
- Meets FAIR principles
- More bibliodiversity

Episciences - OpenAIRE Nexus

How to use

How to use Episciences

- Each journals has its own domain name
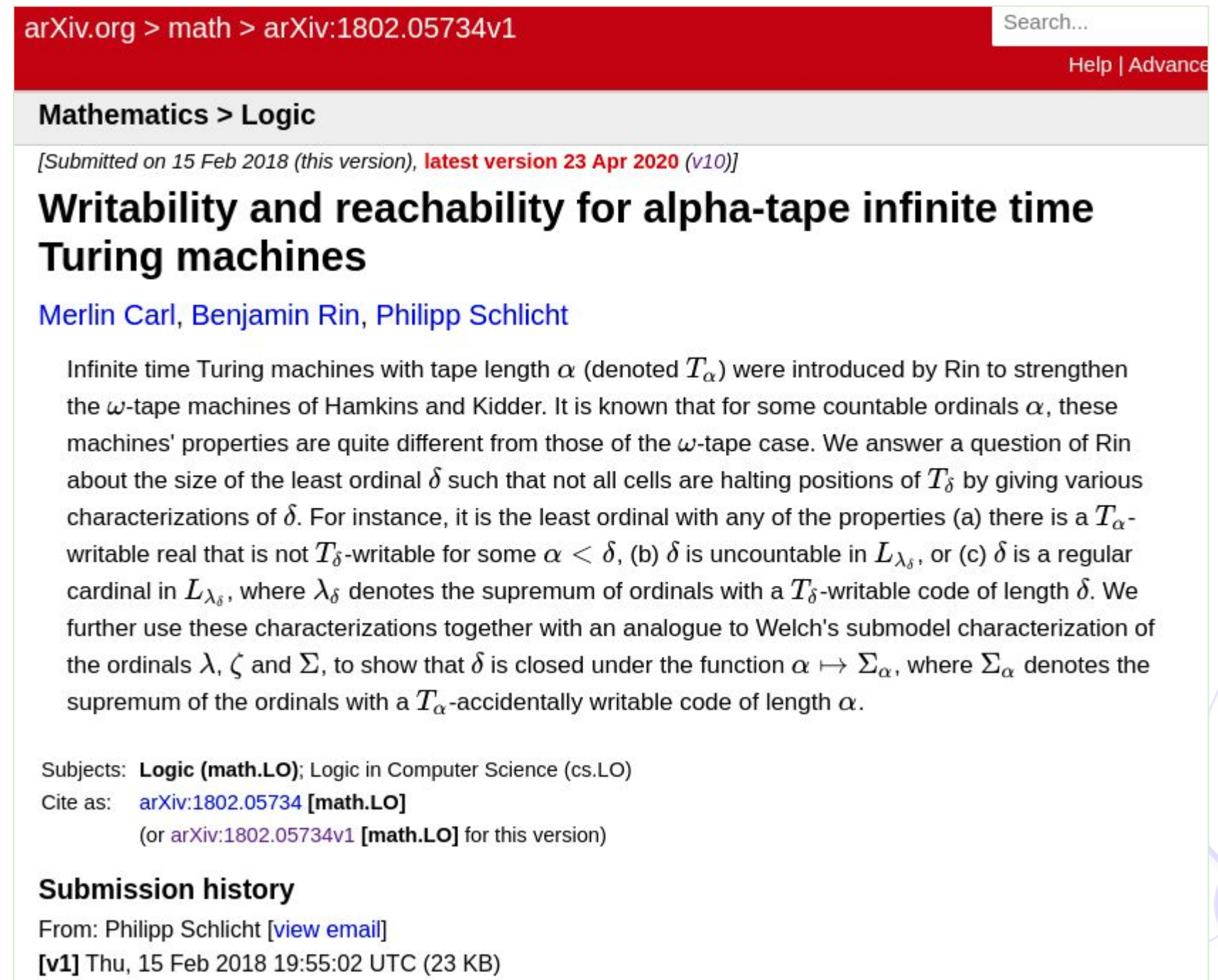Example with:

Hosted on:

https://lmcs.episciences.org/

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arXiv.org > math > arXiv:1802.05734v1

Search...

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Mathematics > Logic

[Submitted on 15 Feb 2018 (this version), latest version 23 Apr 2020 (v10)]

Writability and reachability for alpha-tape infinite time Turing machines

Merlin Carl, Benjamin Rin, Philipp Schlicht

Infinite time Turing machines with tape length α (denoted T_α) were introduced by Rin to strengthen the ω-tape machines of Hamkins and Kidder. It is known that for some countable ordinals α, these machines' properties are quite different from those of the ω-tape case. We answer a question of Rin about the size of the least ordinal δ such that not all cells are halting positions of T_δ by giving various characterizations of δ. For instance, it is the least ordinal with any of the properties (a) there is a T_α-writable real that is not T_δ-writable for some $\alpha < \delta$, (b) δ is uncountable in L_{λ_δ}, or (c) δ is a regular cardinal in L_{λ_δ}, where λ_δ denotes the supremum of ordinals with a T_δ-writable code of length δ. We further use these characterizations together with an analogue to Welch's submodel characterization of the ordinals λ, ζ and Σ, to show that δ is closed under the function $\alpha \mapsto \Sigma_\alpha$, where Σ_α denotes the supremum of the ordinals with a T_α-accidentally writable code of length α.

Subjects: **Logic (math.LO)**; Logic in Computer Science (cs.LO)

Cite as: arXiv:1802.05734 [math.LO]

(or arXiv:1802.05734v1 [math.LO] for this version)

Submission history

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[v1] Thu, 15 Feb 2018 19:55:02 UTC (23 KB)

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LOGICAL METHODS IN COMPUTER SCIENCE

Reachability for infinite time Turing machines with long tapes

Merlin Carl, Benjamin Rin, Philipp Schlicht

Infinite time Turing machine models with tape length α, denoted T_α, strengthen the machines of Hamkins and Kidder [HL00] with tape length ω. A new phenomenon is that for some countable ordinals α, some cells cannot be halting positions of T_α given trivial input. The main open question in [Rin14] asks about the size of the least such ordinal δ. We answer this by providing various characterizations. For instance, δ is the least ordinal with any of the following properties: (a) For some $\xi < \alpha$, there is a T_ξ-writable but not T_α-writable subset of ω. (b) There is a gap in the T_α-writable ordinals. (c) α is uncountable in L_{λ_α}. Here λ_α denotes the supremum of T_α-writable ordinals, i.e. those with a T_α-writable code of length α.
We further use the above characterizations, and an analogue to Welch's submodel characterization of the ordinals λ, ζ and Σ, to show that δ is large in the sense that it is a closure point of the function $\alpha \mapsto \Sigma_\alpha$, where Σ_α denotes the supremum of the T_α-accidentally writable ordinals.

Merlin Carl ; Benjamin Rin ; Philipp Schlicht - **Reachability for infinite time Turing machines with long tapes**

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Keywords: Mathematics - Logic,Computer Science - Logic in Computer Science

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3. Peer review based on journal's grid

Default grid

Display [10 ▼] lines   Search : [_____]

Criterion	Coeff.	Comments	Upload	Rating	visibility	Actions	
✛ Report to the editor	-	Yes	Yes	Qualitative rating (customized)	Editors	✎ Edit	🗑 Remove
✛ Comments for author	-	Yes	Yes	Free rating	Contributor	✎ Edit	🗑 Remove
✛ Reports	-	No	No	Free rating	Editors	✎ Edit	🗑 Remove
✛ Visibility	-	Yes	No	Free rating	Public	✎ Edit	🗑 Remove

Lines 1 to 4, of 4

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Peer-review

- Multiple rounds of peer-review
- New improved versions
- Copy-editing

Versions

Version 10
Version 8
Version 5
Version 4
Version 3
Version 2

Reachability for Turing machines with long tapes

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Cite as: arXiv:1802.05734 **[math.LO]**

(or arXiv:1802.05734v5 **[math.LO]** for this version)

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[v2] Wed, 21 Feb 2018 07:58:12 UTC (23 KB)
[v3] Mon, 21 Jan 2019 17:35:28 UTC (28 KB)
[v4] Thu, 23 May 2019 11:53:38 UTC (29 KB)
[v5] Thu, 5 Dec 2019 20:00:10 UTC (31 KB)
[v6] Tue, 10 Dec 2019 07:28:22 UTC (31 KB)
[v7] Mon, 9 Mar 2020 08:05:29 UTC (31 KB)
[v8] Wed, 8 Apr 2020 14:35:32 UTC (39 KB)
[v9] Mon, 20 Apr 2020 20:35:58 UTC (41 KB)
[v10] Thu, 23 Apr 2020 09:08:19 UTC (41 KB)

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4. Journal Layout

REACHABILITY FOR INFINITE TIME TURING MACHINES WITH LONG TAPES

MERLIN CARL, BENJAMIN RIN, AND PHILIPP SCHLICHT

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ABSTRACT. Infinite time Turing machine models with tape length α, denoted T_α, strengthen the machines of Hamkins and Kidder with tape length ω. A new phenomenon is that for some countable ordinals α, some cells cannot be halting positions of T_α given trivial input. The main open question in a paper of Rin from 2014 asks about the size of the least such ordinal δ.

We answer this by providing various characterizations. For instance, δ is the least ordinal with any of the following properties:
- For some $\xi < \alpha$, there is a T_ξ-writable but not T_α-writable subset of ω.
- There is a gap in the T_α-writable ordinals.
- α is uncountable in L_{λ_α}.

Here λ_α denotes the supremum of T_α-writable ordinals, i.e. those with a T_α-writable code of length α.

We further use the above characterizations, and an analogue to Welch's submodel characterization of the ordinals λ, ζ and Σ, to show that δ is large in the sense that it is a closure point of the function $\alpha \mapsto \Sigma_\alpha$, where Σ_α denotes the supremum of the T_α-accidentally writable ordinals.

Merlin Carl ; Benjamin Rin ; Philipp Schlicht - **Reachability for infinite time Turing machines with long tapes**

lmcs:4444 - Logical Methods in Computer Science, April 24, 2020, Volume 16, Issue 2 -
https://doi.org/10.23638/LMCS-16(2:2)2020

Reachability for infinite time Turing machines with long tapes

Authors: Merlin Carl ; Benjamin Rin ; Philipp Schlicht

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Volume: Volume 16, Issue 2
Published on: April 24, 2020
Submitted on: April 16, 2018
Keywords: Mathematics - Logic,Computer Science - Logic in Computer Science

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5. Publication: one Version Of Record

LOGICAL METHODS IN COMPUTER SCIENCE

Reachability for infinite time Turing machines with long tapes

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Merlin Carl, Benjamin Rin, Philipp Schlicht

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Subjects: **Logic (math.LO)**; Logic in Computer Science (cs.LO)

Journal reference: Logical Methods in Computer Science, Volume 16, Issue 2 (April 24, 2020) lmcs:6429

DOI: 10.23638/LMCS-16(2:2)2020

Cite as: arXiv:1802.05734 [math.LO]
(or arXiv:1802.05734v10 [math.LO] for this version)

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Carl, Merlin and Rin, Benjamin and Schlicht, Philipp - Reachability for infinite time Turing machines with long tapes

lmcs:4444 - Logical Methods in Computer Science, April 24, 2020, Volume 16, Issue 2 - https://doi.org/10.23638/LMCS-16(2:2)2020

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Article status

Current status: Published

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1. Creation of a personalised site for each journal
2. Technical support
3. Help with the publication and distribution
4. Referencing

Questions & Answers

Creation of a personalised site

- **22 journals** + Elpub Conference Proceedings
  - Informatics and Applied Mathematics (8);
  - Mathematics (7);
  - Social Sciences and Humanities (5);
  - Environment (1);
  - Mechanics (1): JTCAM—*Journal of Theoretical, Computational and Applied Mechanics*.
- **a personal website** for each journal
      url: journalsname.episciences.org
- **configuration**: menu, indexes, guidelines, editorial boards and policies, etc.
- **DOI** for each published document

Crossref

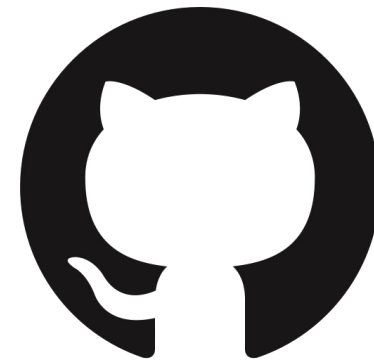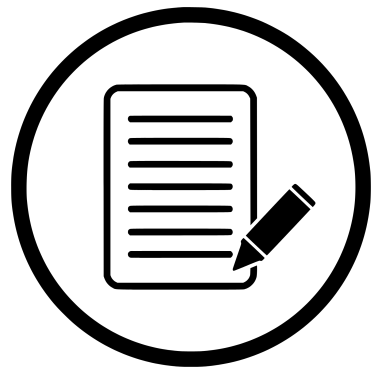# Creation of a personalised site

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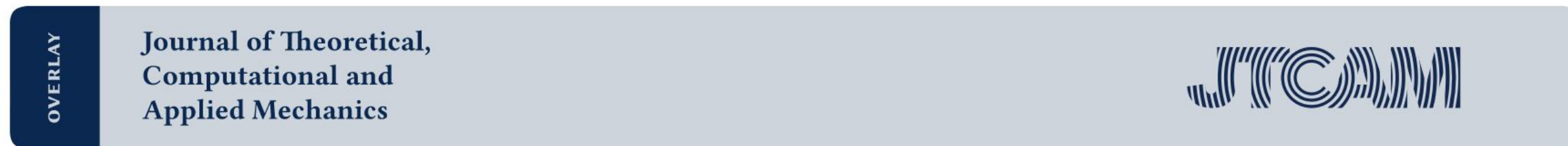
Technical support

- **bilingual documentation** (English/French)
- technical support by **email** and **GitHub**
- specific technical support by Inria (epiIAM) and the Institut Fourier (epiMaths)

Help with the publication and distribution

- ISSN
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- open access publishing requirements
- advice and assistance in applying for institutional support
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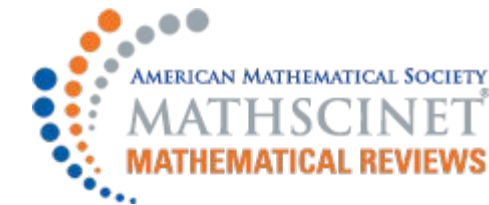
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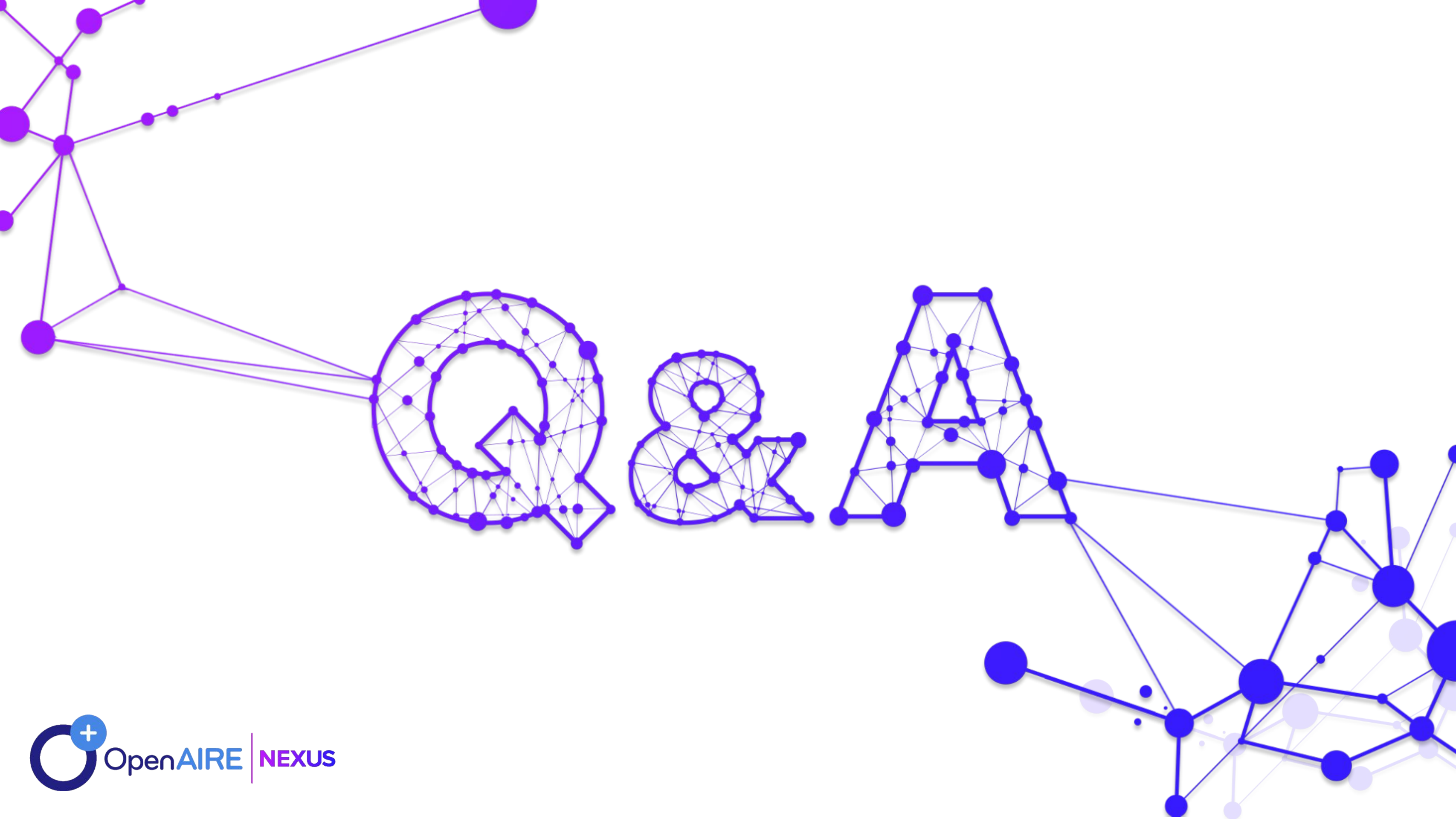
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