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Genuine Open Access Publishing

Open Access Week @ CERN, 27 October 2022

Jean-Sébastien Caux

Institute of Physics
University of Amsterdam

Plan of the talk

- SciPost
- Best practices
- Infrastructure
- SciPost and CERN

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What is it?

A complete publishing portal

(from preprint to metadata curation)

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- Commenting
- Metadata services

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Summary?

- Openness
- Quality

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  - *strict editorial/financial decoupling*
  - *no profit-making on the back of scientists*
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- Reform impact assessment

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Journals

- SciPost Physics
- SciPost Physics Core
- SP Lecture Notes
- SP Proceedings
- SP Codebases

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>1750 publications as of now

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Best practice examples

- Peer-witnessed refereeing
- Cost-slashing consortial business model
- Community-driven
- Open infrastructure

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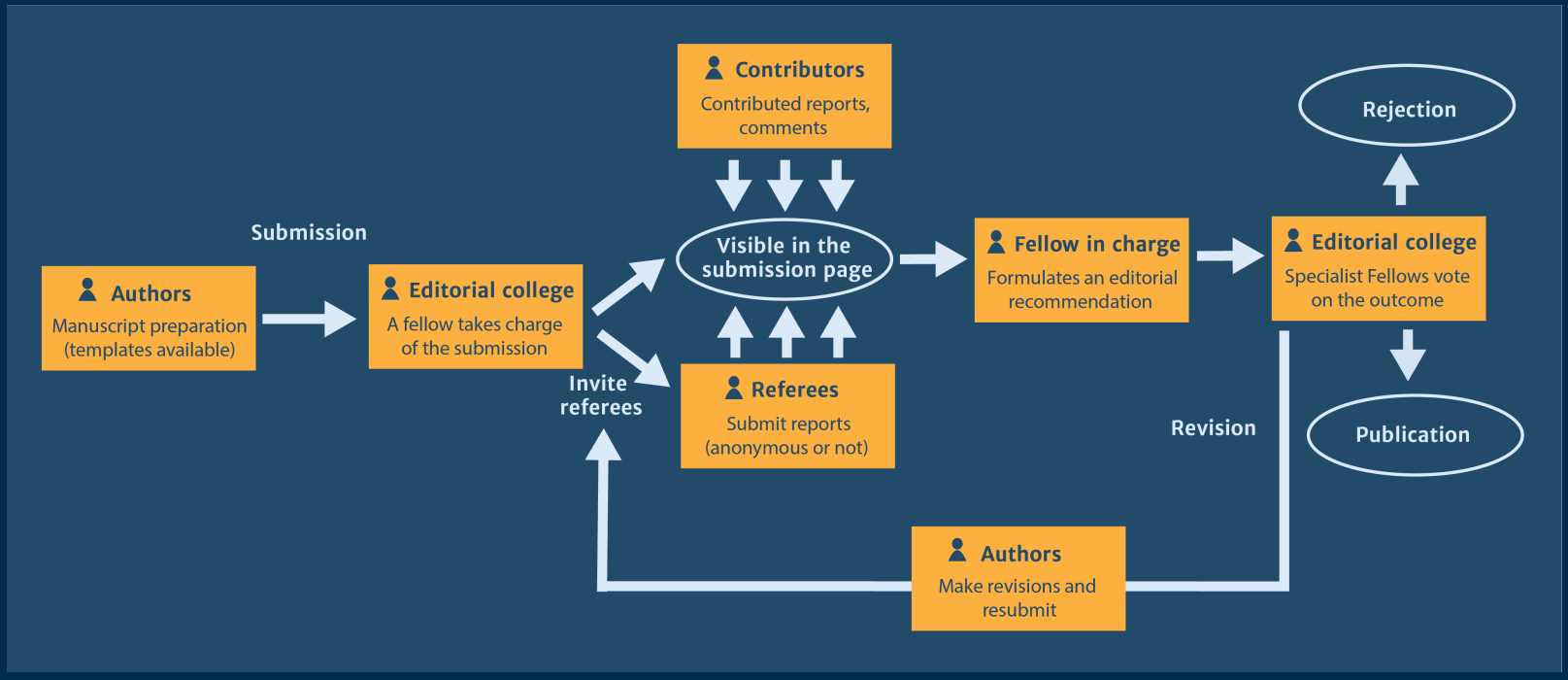
Editorial workflow



New format: Codebases

Quality-oriented publication venue
for codes and algorithms

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Publication formats

- User guide
- Codebase release
  [git repo]

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Features

- refereed
- citable
- Bundles: guides
  and releases linked

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Codebase release 1.0 for BlockGen

Enrico Bothmann, Walter Giele, Stefan Hoeche, Joshua Isaacson, Max Knobbe

SciPost Phys. Codebases 3-r1.0 (2022) · published 23 August 2022

doi: 10.21468/SciPostPhysCodeb.3-r1.0 publication repo live repo (external) BiBTeX RIS Submissions/Reports Check for updates

This Publication is part of a bundle

When citing, cite all relevant items (e.g. for a Codebase, cite both the article and the release you used).

DOI	Type
10.21468/SciPostPhysCodeb.3	Article
10.21468/SciPostPhysCodeb.3-r1.0	Codebase release

Abstract

The compute efficiency of Monte-Carlo event generators for the Large Hadron Collider is expected to become a major bottleneck for simulations in the high-luminosity phase. Aiming at the development of a full-fledged generator for modern GPUs, we study the performance of various recursive strategies to compute multi-gluon tree-level amplitudes. We investigate the scaling of the algorithms on both CPU and GPU hardware. Finally, we provide practical recommendations as well as baseline implementations for the development of future simulation programs. The GPU implementations can be found at: https://www.gitlab.com/ebothmann/blockgen-archive.

SciPost's business model

Diamond

(though I prefer metals)

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- costs: about €600 per publication

A fraction of the current norm!

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  A fraction of the current norm!
- consortial model: donations

  (inspirations: arXiv, ...)

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The PubFractions System

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- Every year, SciPost computes an average full infrastructure cost per publication
- Organizations can use this to determine their level of support

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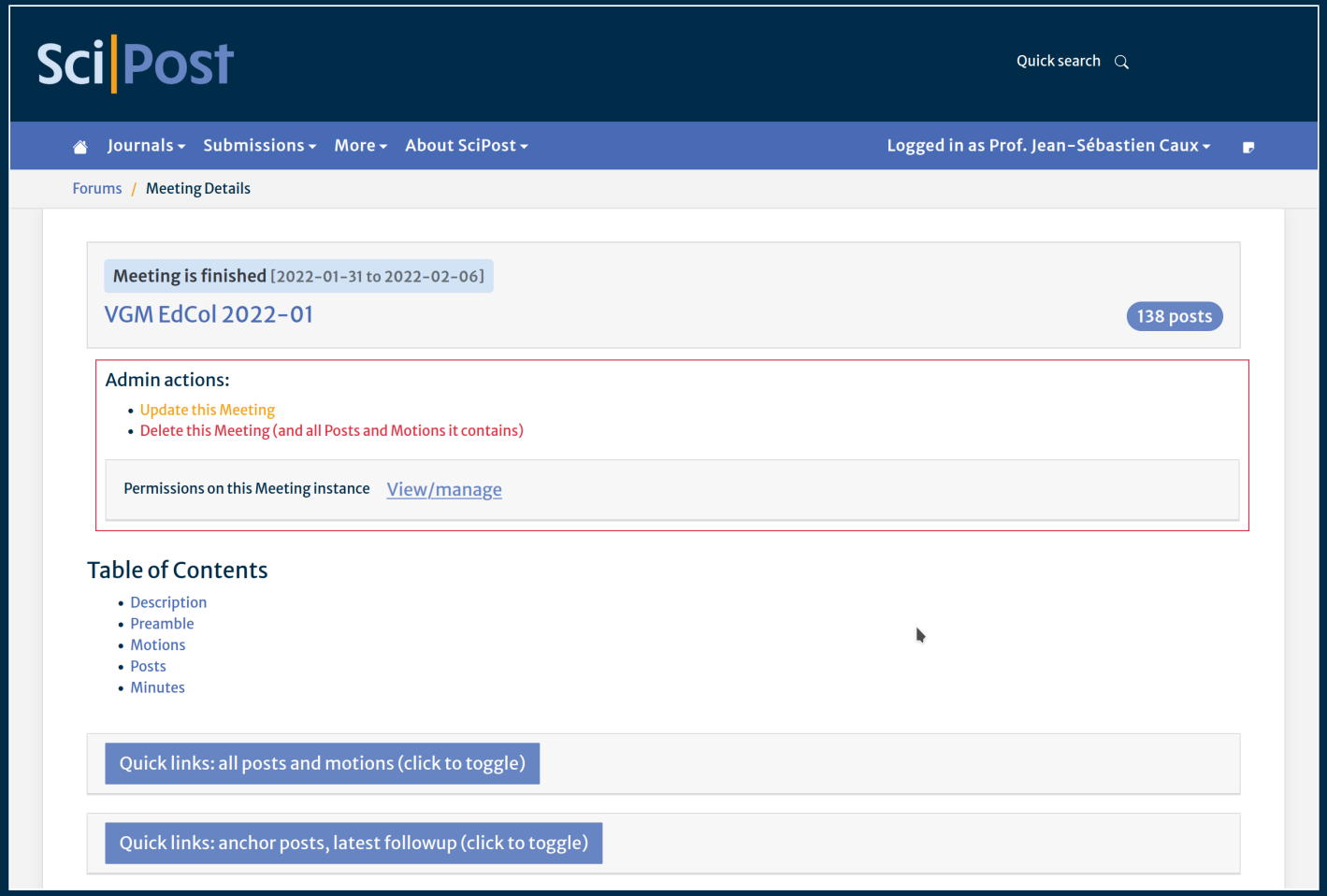
Community-driven

Latest Virtual General Meeting (2022)



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Tech stack:

All our systems are built from scratch.

We leverage and contribute to FOSS.

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- Django *[Python web framework]*
- Postgresql *[database engine]*
- ~~Vue.js~~ HTMX *[frontend tech]*
- Bootstrap *[frontend styling]*
- MathJax *[LaTeX javascript engine]*
- GitLab *[hub @ git.scipost.org]*
- ... lots more, see git.scipost.org

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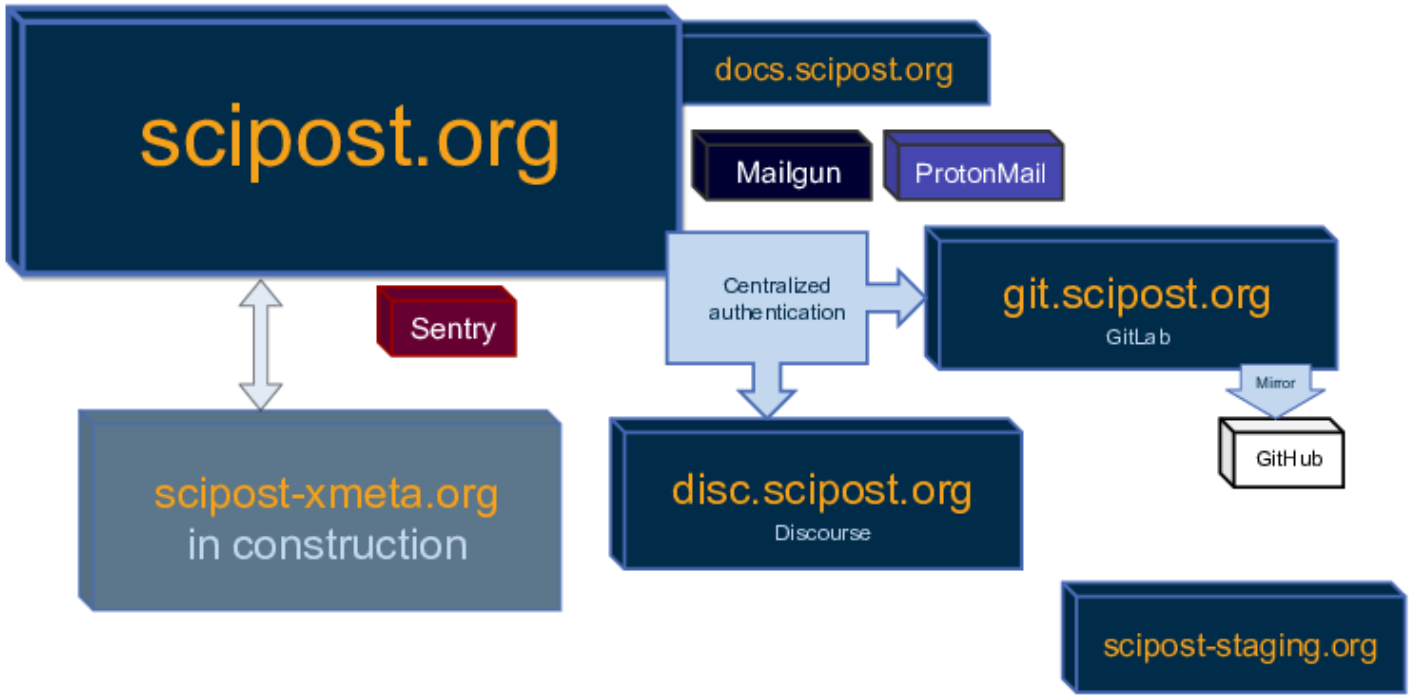
SciPost Services Architecture

(July 2021)



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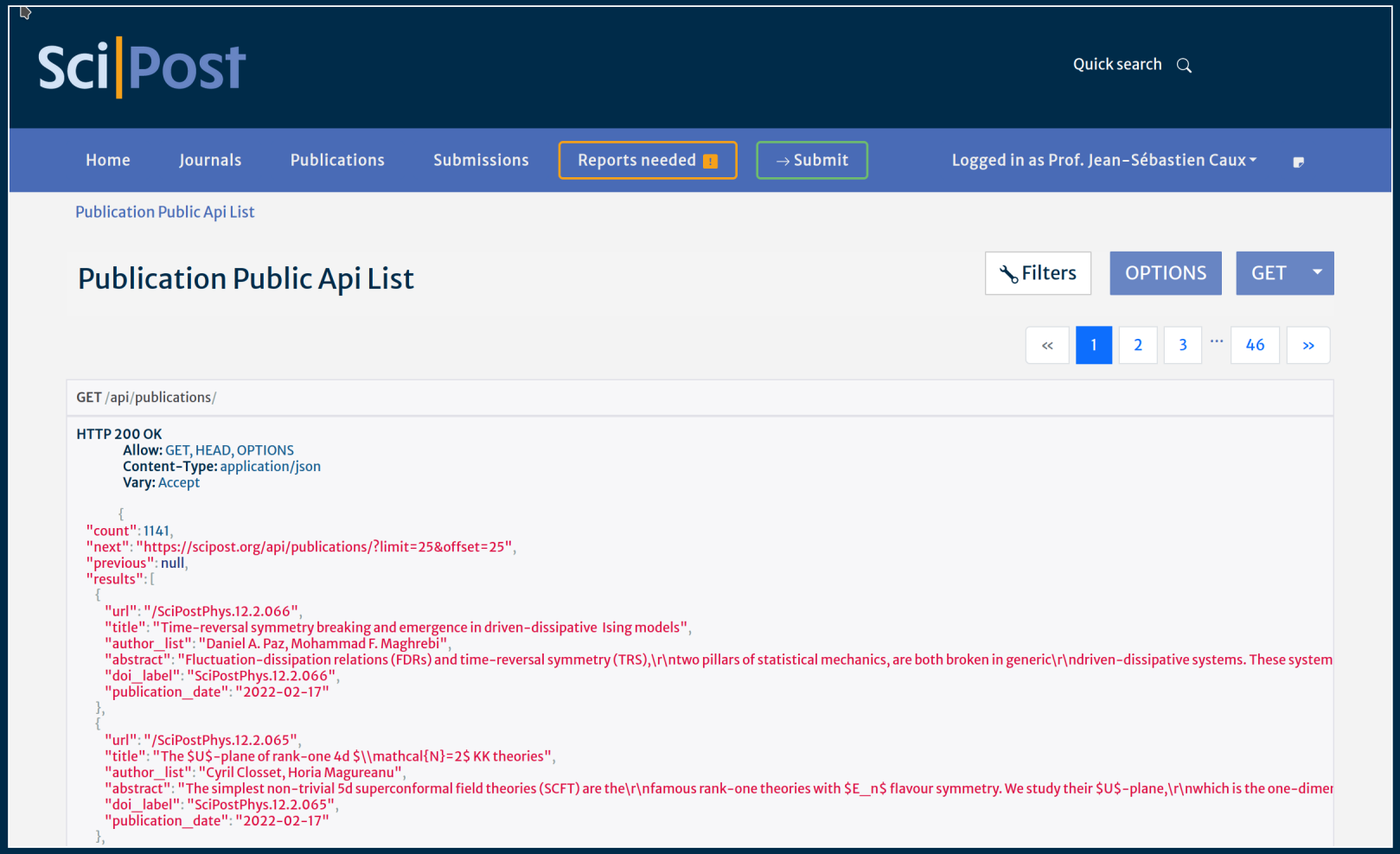
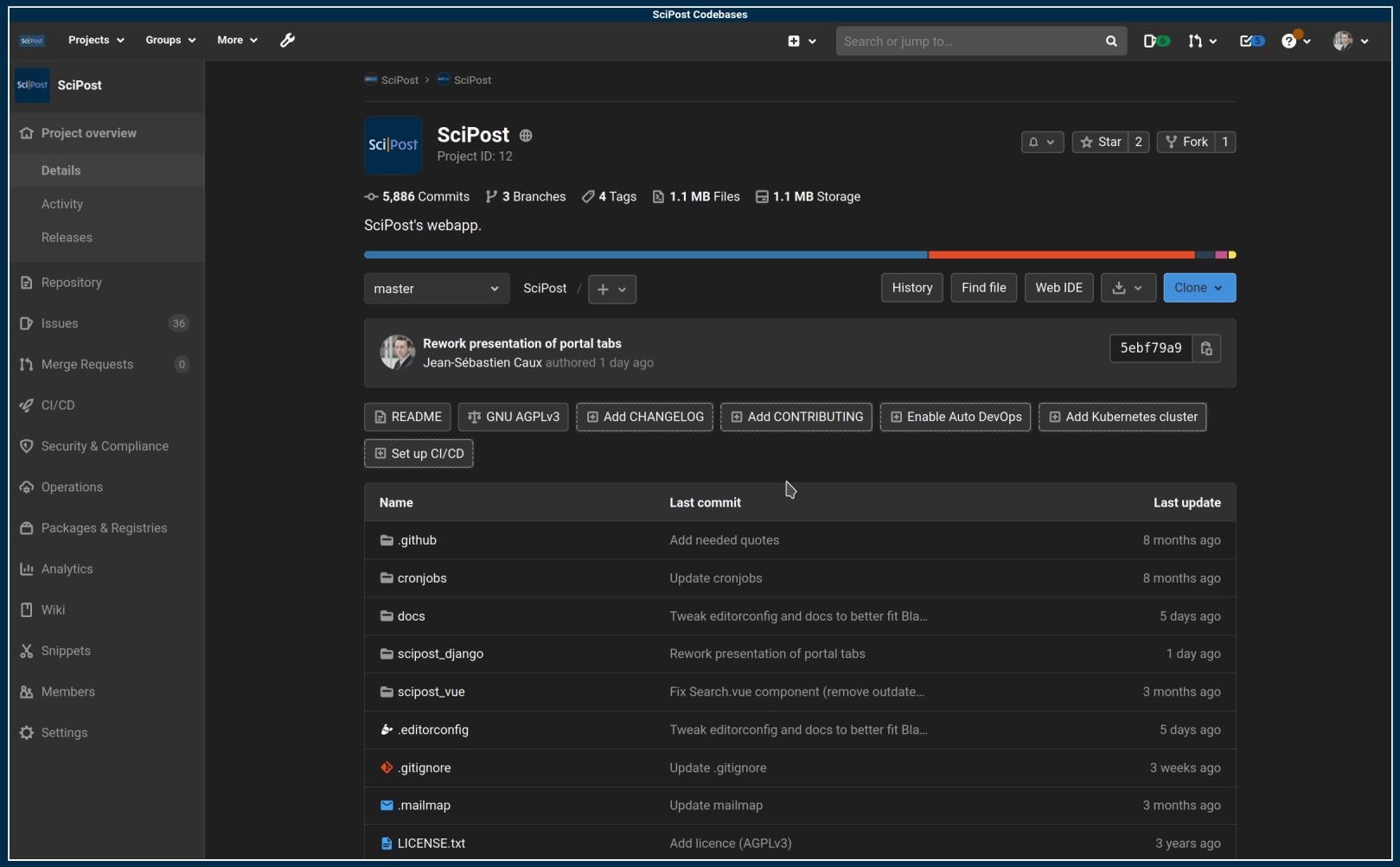
Browsable API



Software repo hosting

@ git.scipost.org



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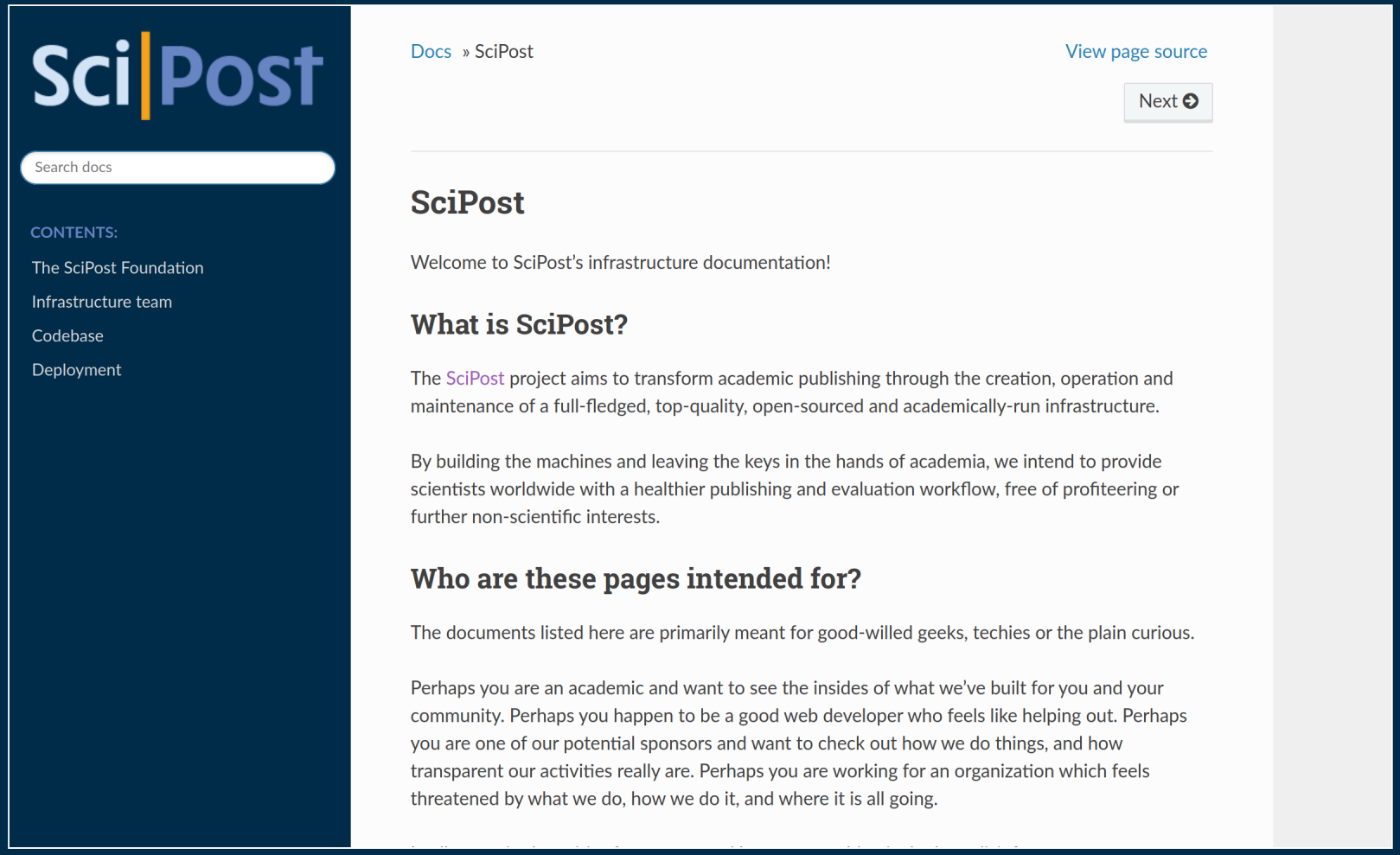
Documentation

@ docs.scipost.org



Community discussions

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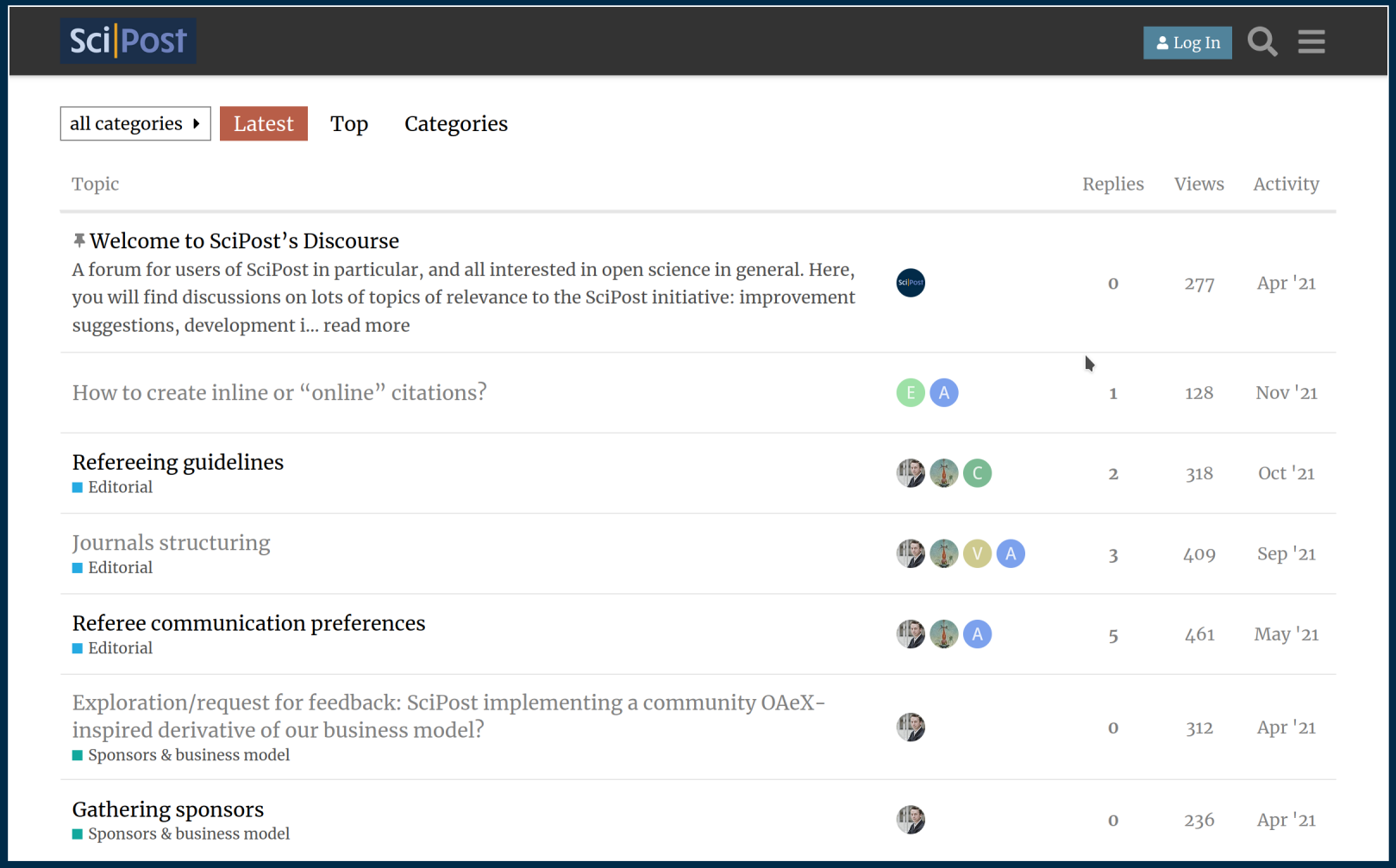

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Collaboration Agreements

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2017-2019 (€6k) & 2020-2022 (€12k)

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Working on renewal and expansion!

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Publication statistics

High-energy physics

Total: 853
[2022: 432]

SciPost Physics	459	[145]
... Proceedings	338	[262]
... Core	28	[10]
... Lecture Notes	25	[13]
... Codebases	2	[2]

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Final thought

*Genuine Open Access Publishing is like **Linux***

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- ... who are experts at customer "lock-in"

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- It's a fragmented community

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Parallels are evident:

- It's the better OS, but "less easy" to use
- It's competing against huge corporations...
- ... who are experts at customer "lock-in"
- It's a fragmented community
- It's only adopted by a minority, despite the compelling technological, privacy, flexibility, customizability, and... cost advantages

Jean-Sébastien Caux
@jscaux

I recently abandoned Apple and moved back to Linux.

It's like leaving a multicolour candy superstore and setting out in the 🇨🇦 wilderness.

Sure, I have to paddle harder and there are some mosquitoes, but I tell you: the air is much fresher and the vistas way more beautiful.

The SciPost Team

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Jasper van Wezel	Treasurer	Jan Willem Wijnen	Sponsors
		George Katsikas	Production

Thanks!