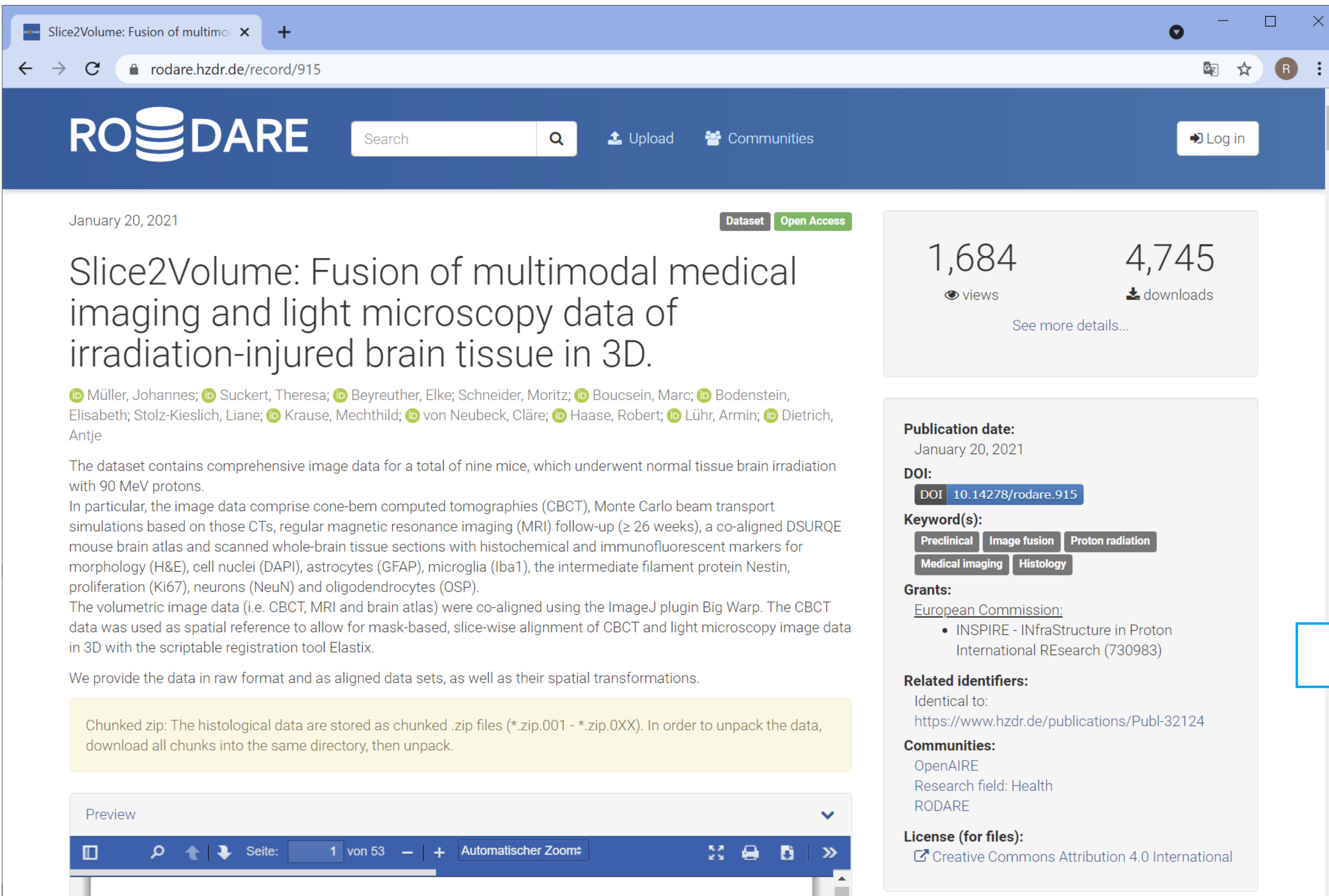


Use cases: Data

- Unique datasets
- Valuable for biologists
- Valuable for software developers
- Institutional servers / services
- <https://idr.openmicroscopy.org/>
- <https://zenodo.org>

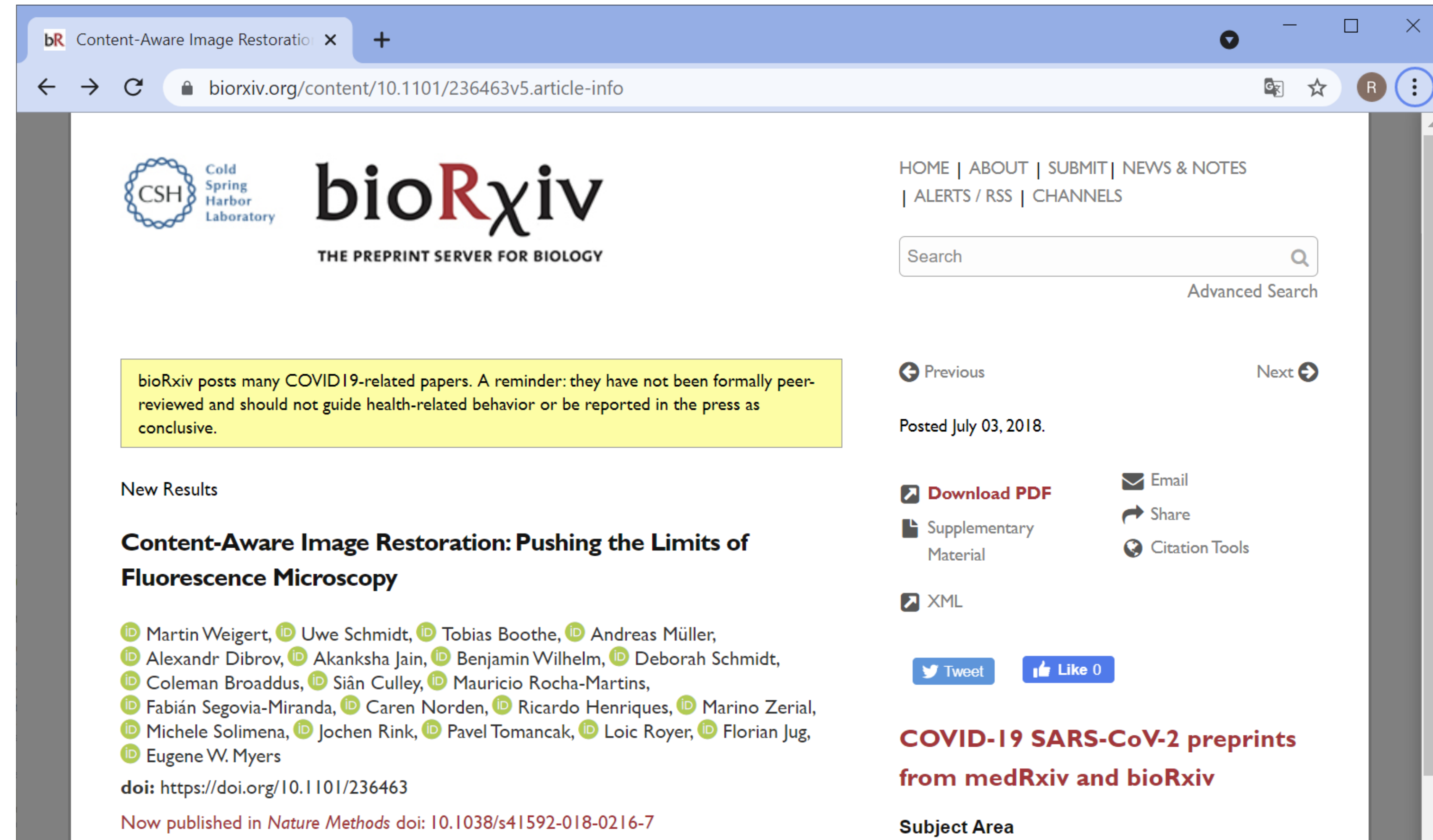


<https://rodare.hzdr.de/record/915>

<https://twitter.com/nKiaru/status/1409194004219142148?s=20>

Use cases: Manuscripts

- Preprints
 - Accessible / reusable
 - <https://arxiv.org/>
 - <https://biorxiv.org/>
 - <https://medrxiv.org/>
- Journals

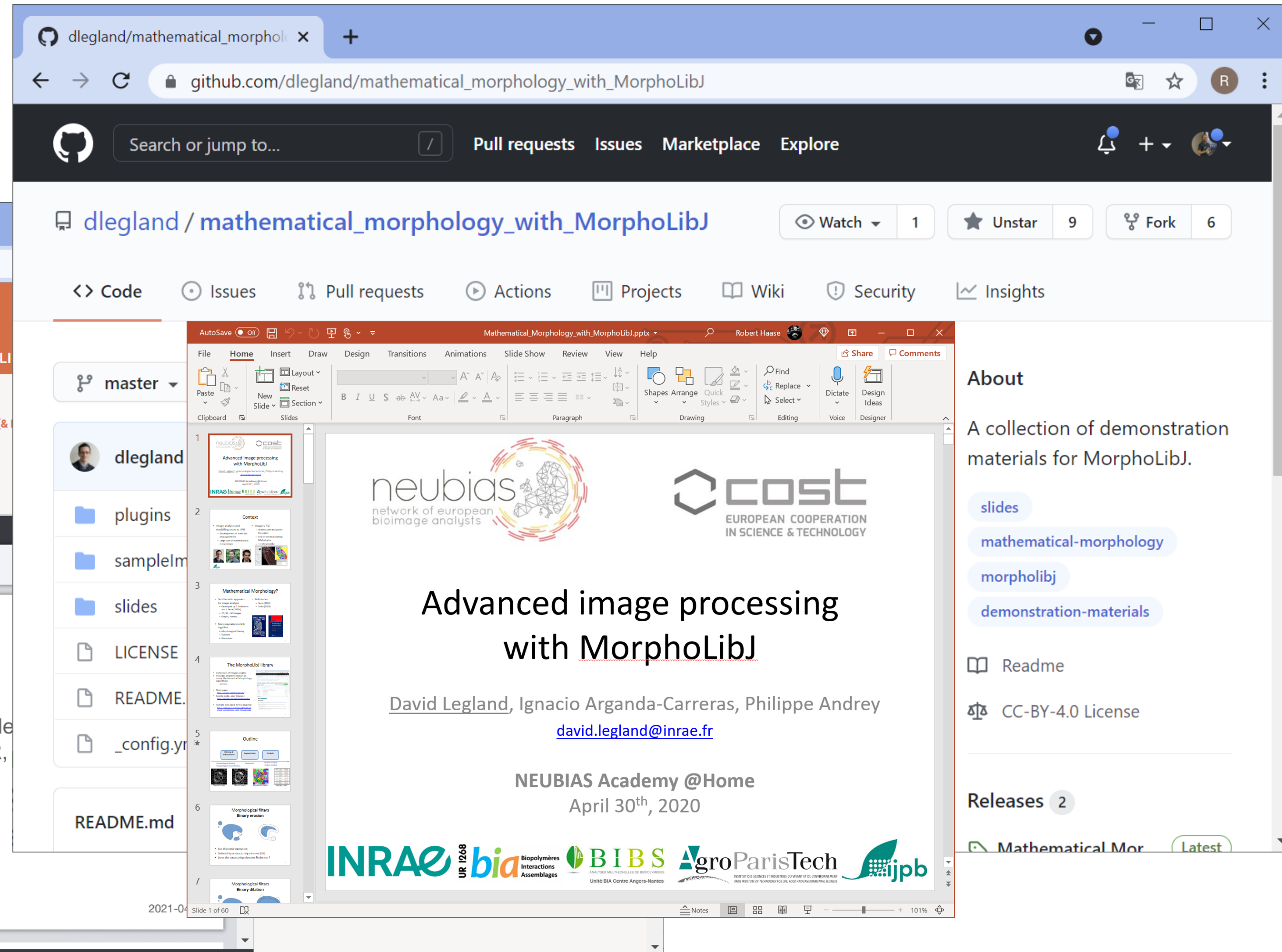
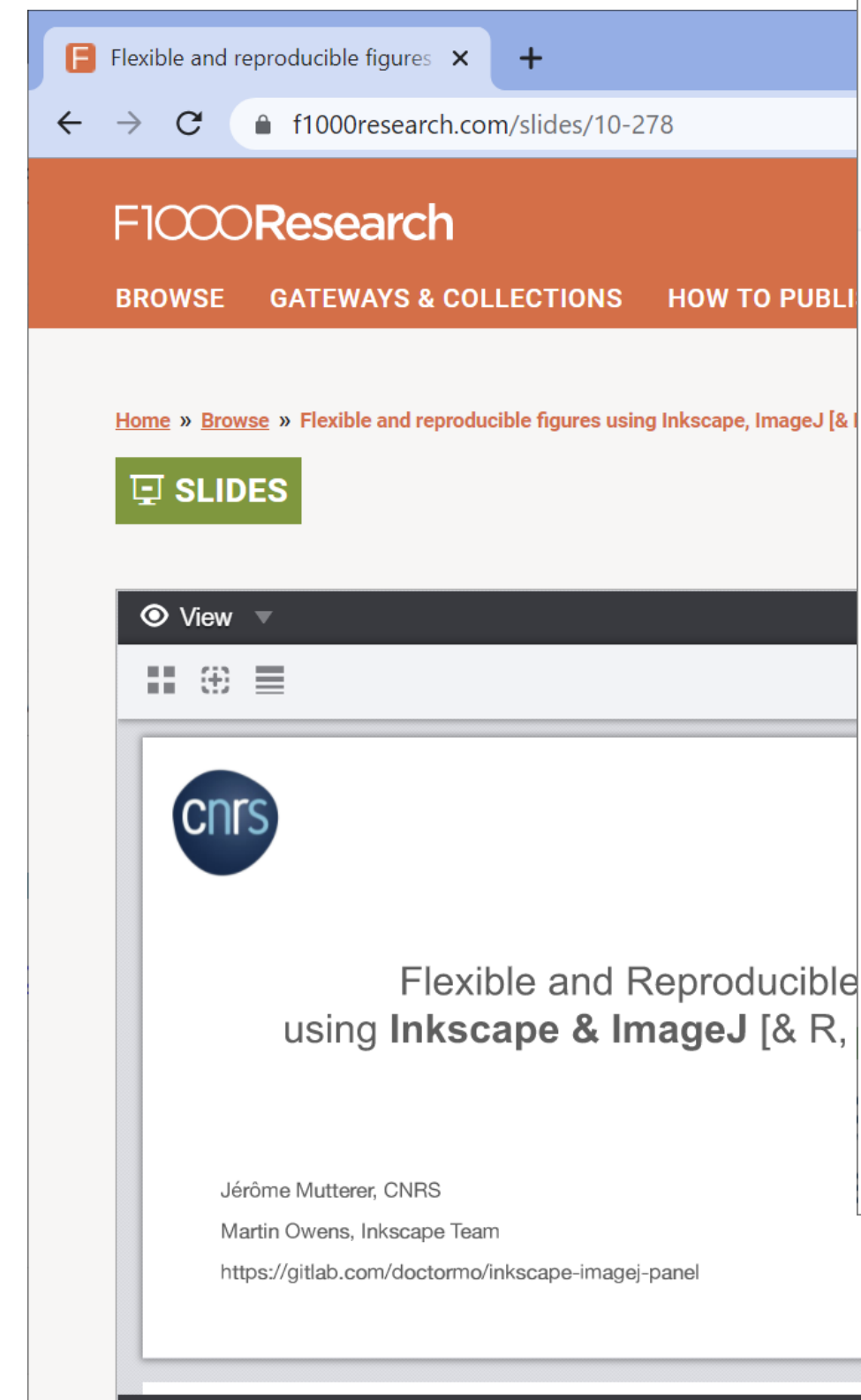


The screenshot shows a web browser window displaying a bioRxiv article. The address bar shows the URL <https://www.biorxiv.org/content/10.1101/236463v5.article-info>. The page header includes the Cold Spring Harbor Laboratory logo and the bioRxiv logo with the tagline "THE PREPRINT SERVER FOR BIOLOGY". A navigation bar on the right contains links for HOME, ABOUT, SUBMIT, NEWS & NOTES, ALERTS / RSS, and CHANNELS. Below this is a search bar and an "Advanced Search" link. A yellow warning box states: "bioRxiv posts many COVID19-related papers. A reminder: they have not been formally peer-reviewed and should not guide health-related behavior or be reported in the press as conclusive." The article title is "Content-Aware Image Restoration: Pushing the Limits of Fluorescence Microscopy". The authors listed are Martin Weigert, Uwe Schmidt, Tobias Boothe, Andreas Müller, Alexandr Dibrov, Akanksha Jain, Benjamin Wilhelm, Deborah Schmidt, Coleman Broaddus, Siân Culley, Mauricio Rocha-Martins, Fabián Segovia-Miranda, Caren Norden, Ricardo Henriques, Marino Zerial, Michele Solimena, Jochen Rink, Pavel Tomancak, Loic Royer, Florian Jug, and Eugene W. Myers. The DOI is <https://doi.org/10.1101/236463>. A note indicates the article is now published in *Nature Methods* with DOI 10.1038/s41592-018-0216-7. On the right, there are links for "Download PDF", "Supplementary Material", "XML", "Email", "Share", and "Citation Tools". Social media buttons for "Tweet" and "Like 0" are also present. At the bottom right, there is a section for "COVID-19 SARS-CoV-2 preprints from medRxiv and bioRxiv" and a "Subject Area" link.

Use cases: Teaching material

Re-using, advertising your work.

- <https://f1000research.com/neubias>
- <https://figshare.com>
- <https://github.com>

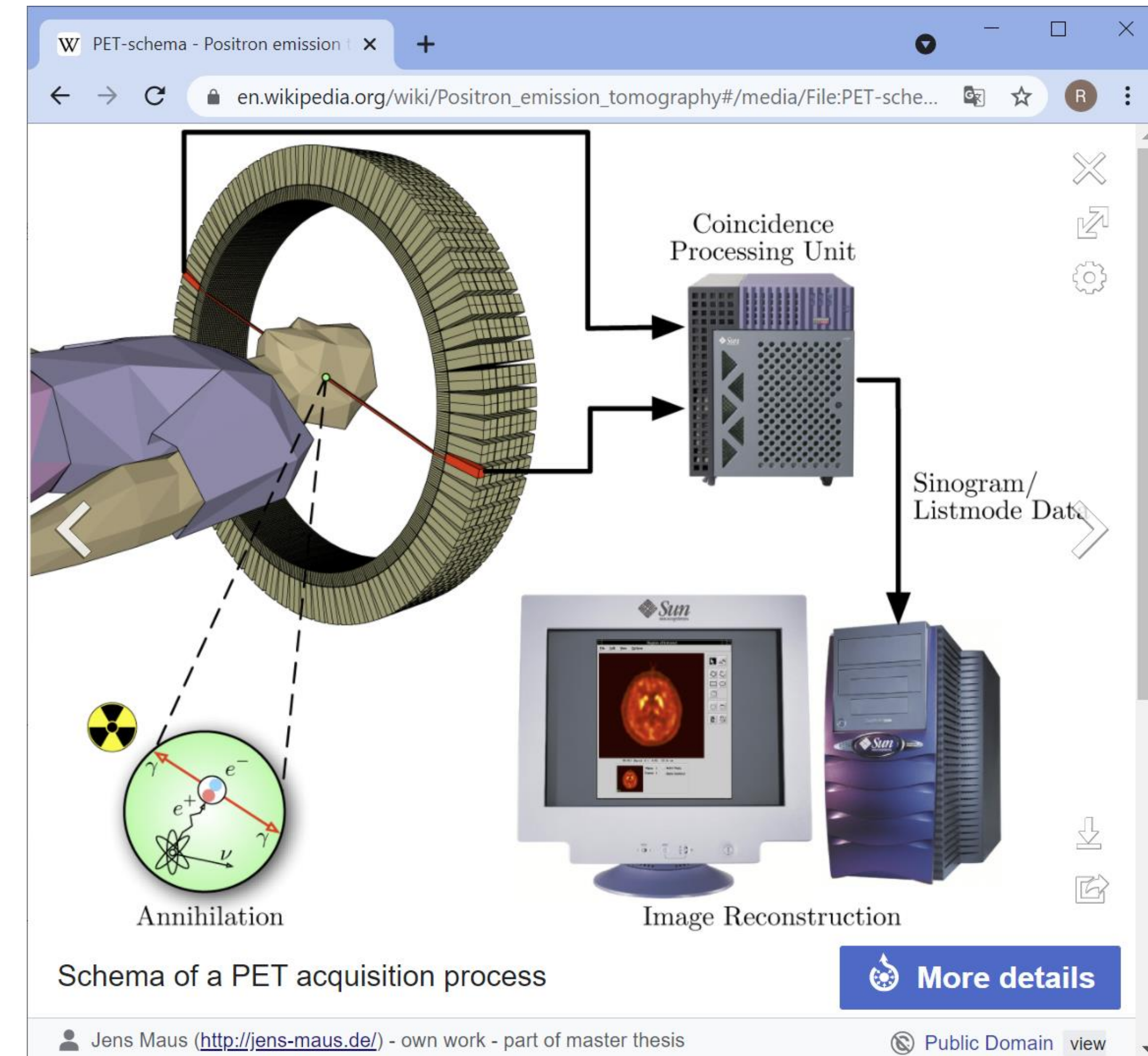


<https://f1000research.com/slides/10-278>

https://github.com/dlegland/mathematical_morphology_with_MorphoLibJ

Use cases: Figures

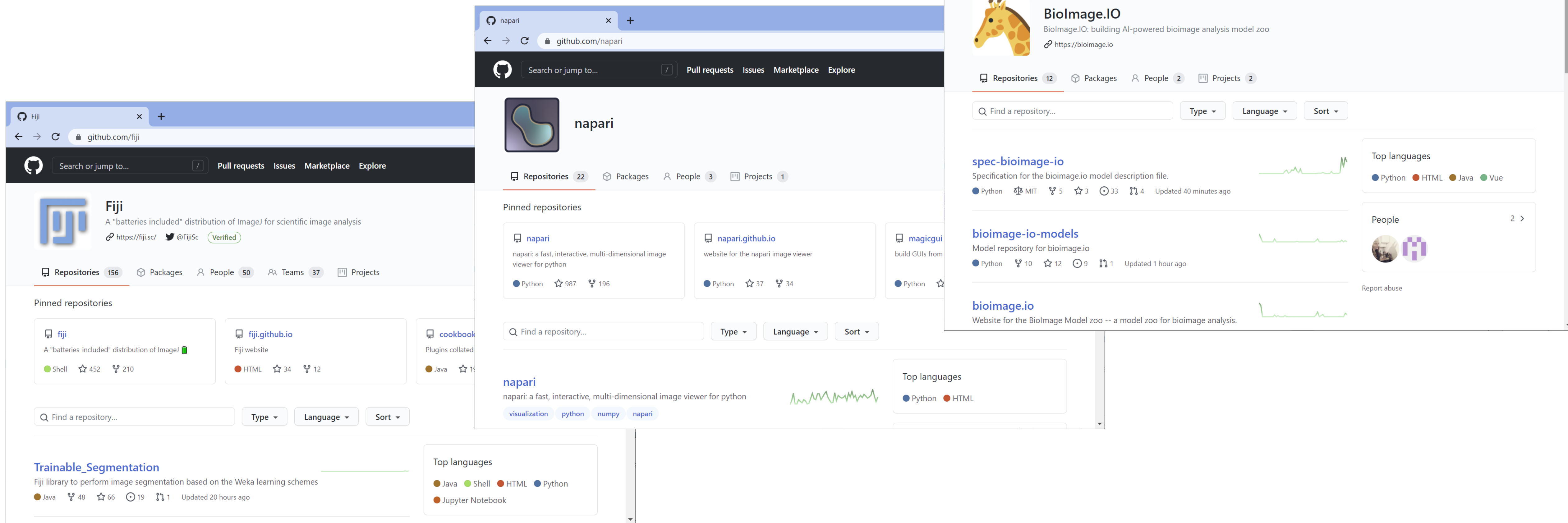
- Share efforts
 - Talk about each others' work
- Advertise your work
- ... because our work is often publicly funded
- https://commons.wikimedia.org/wiki/Main_Page
- <https://figshare.com>



https://en.wikipedia.org/wiki/Positron_emission_tomography#/media/File:PET-schema.png

Use cases: Code

Collaboration in open-source projects *unthinkable* without openly sharing and transparent licensing



The image displays three overlapping screenshots of GitHub profiles, illustrating open-source collaboration in bioimage analysis. The top-left screenshot shows the **Fiji** profile, described as a "batteries included" distribution of ImageJ for scientific image analysis. The middle screenshot shows the **napari** profile, a fast, interactive, multi-dimensional image viewer for Python. The rightmost screenshot shows the **BioImage.IO** profile, building an AI-powered bioimage analysis model zoo. Each profile includes statistics on repositories, packages, people, and projects, as well as pinned repositories and top languages used.

Fiji
A "batteries included" distribution of ImageJ for scientific image analysis
https://fiji.sc/ @FijiSc Verified
Repositories: 156 Packages: 50 People: 50 Teams: 37 Projects: 1
Pinned repositories: **fiji** (Shell, 452 stars, 210 forks), **fiji.github.io** (HTML, 34 stars, 12 forks), **cookbook** (Java, 15 stars)
Trainable_Segmentation: Fiji library to perform image segmentation based on the Weka learning schemes (Java, 48 forks, 66 stars, 19 commits, updated 20 hours ago)
Top languages: Java, Shell, HTML, Python, Jupyter Notebook

napari
napari: a fast, interactive, multi-dimensional image viewer for python
Repositories: 22 Packages: 3 People: 3 Projects: 1
Pinned repositories: **napari** (Python, 987 stars, 196 forks), **napari.github.io** (Python, 37 stars, 34 forks), **magicgui** (Python, 10 stars)
napari: a fast, interactive, multi-dimensional image viewer for python (visualization, python, numpy, napari)
Top languages: Python, HTML

BioImage.IO
BioImage.IO: building AI-powered bioimage analysis model zoo
https://bioimage.io
Repositories: 12 Packages: 2 People: 2 Projects: 2
Find a repository... Type Language Sort
spec-bioimage-io: Specification for the bioimage.io model description file. (Python, MIT, 5 forks, 3 stars, 33 commits, 4 issues, updated 40 minutes ago)
bioimage-io-models: Model repository for bioimage.io (Python, 10 forks, 12 stars, 9 commits, 1 issue, updated 1 hour ago)
bioimage.io: Website for the BioImage Model zoo -- a model zoo for bioimage analysis.
Top languages: Python, HTML
People: 2 > Report abuse

FAIR sharing

Findable

- Meta-data, unique identifiers, searchable databases

Accessible

- Open & free protocols
- Authentication / authorization

Interoperable

- [meta] data use a formal, accessible, shared, broadly accessible language
- References to other [meta]data

Reusable

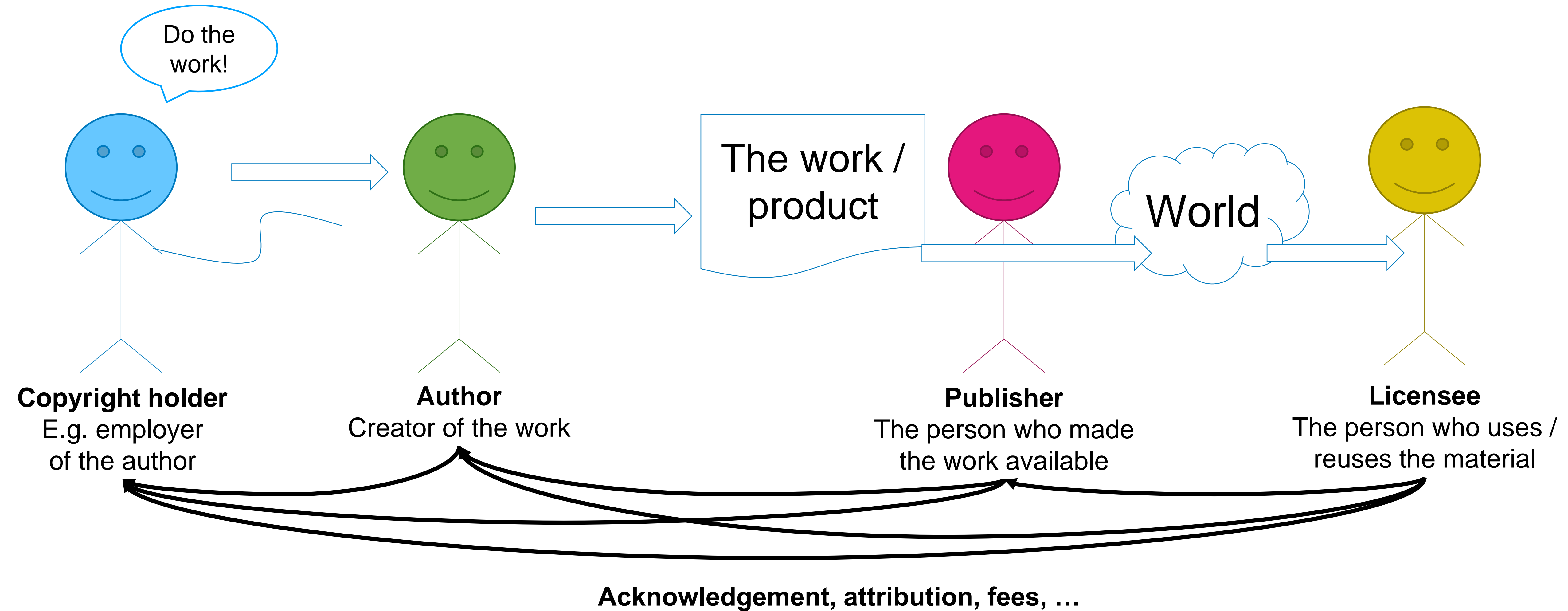
Do not use materials that do not have a licence

- Properly licensed, associated relevant meta data, community-relevant community standards

~~Open Access~~

The FAIR principles have nothing to do with “Open Access”

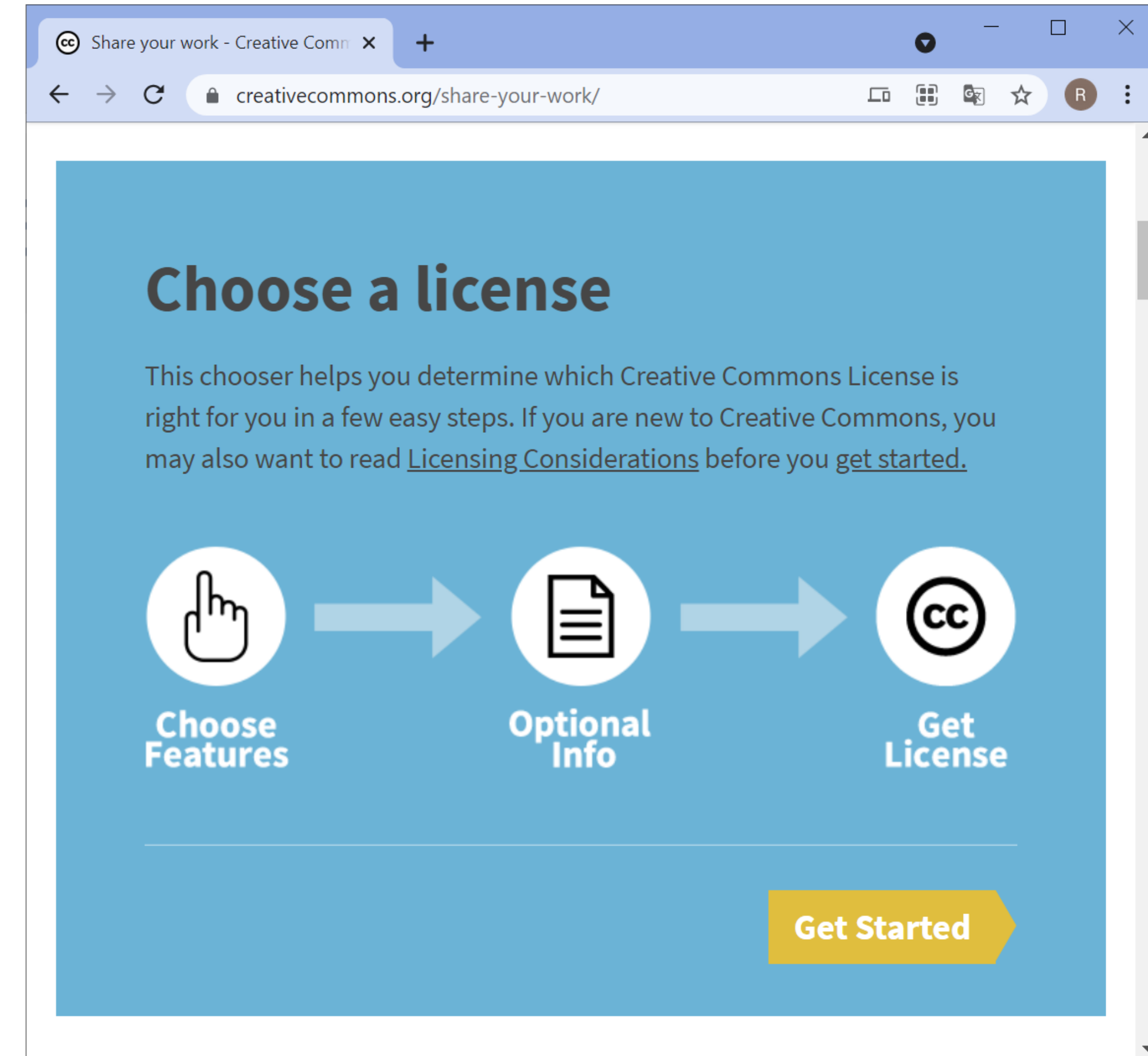
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- Attribution Non-Commercial Int. (CC-BY-NC)
- Attribution NoDerivatives Int. (CC-BY-ND)

+ Combinations, e.g. CC-BY-NC-ND



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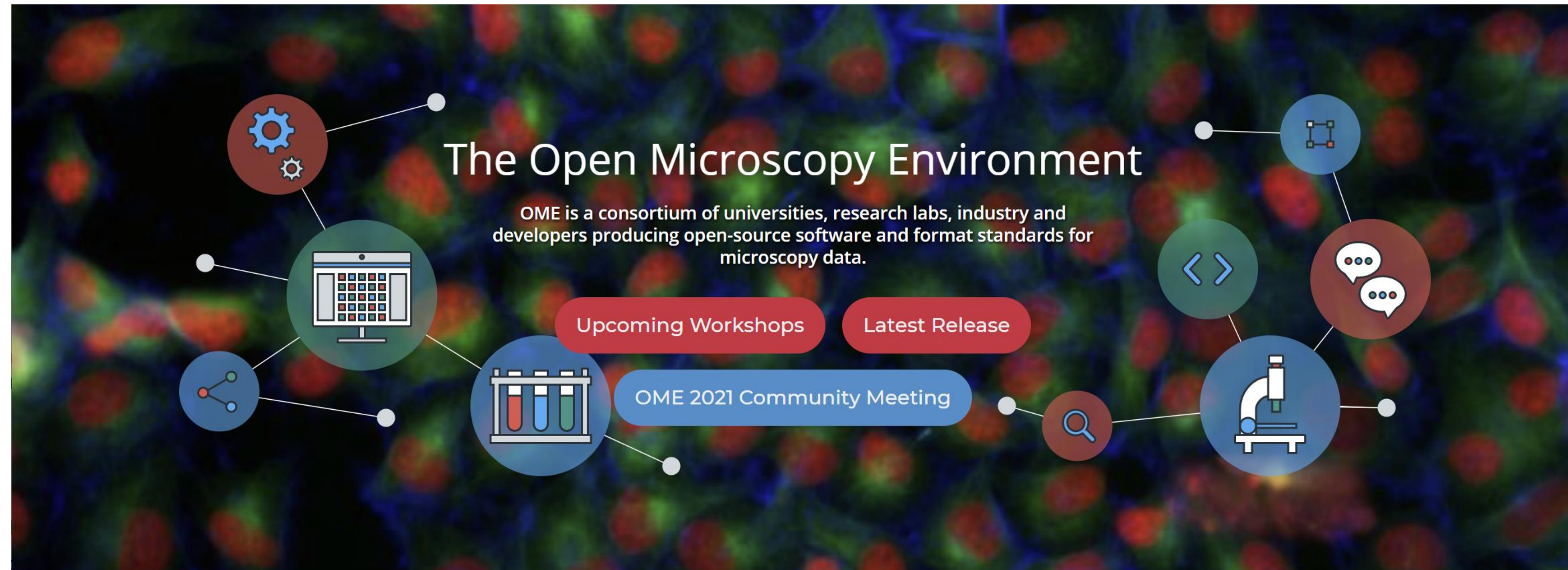
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- Example



You need to put such a sentence and keep the link to CC-BY

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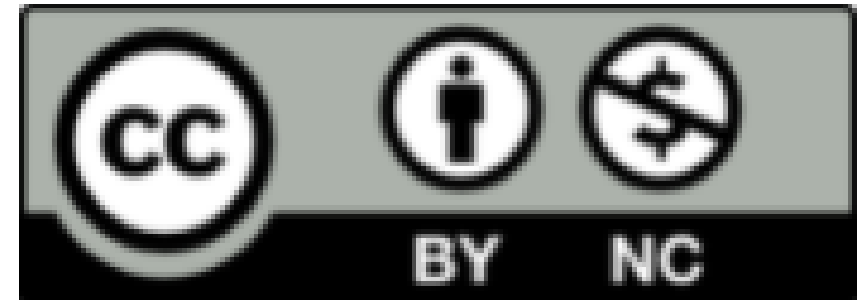
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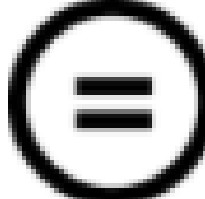
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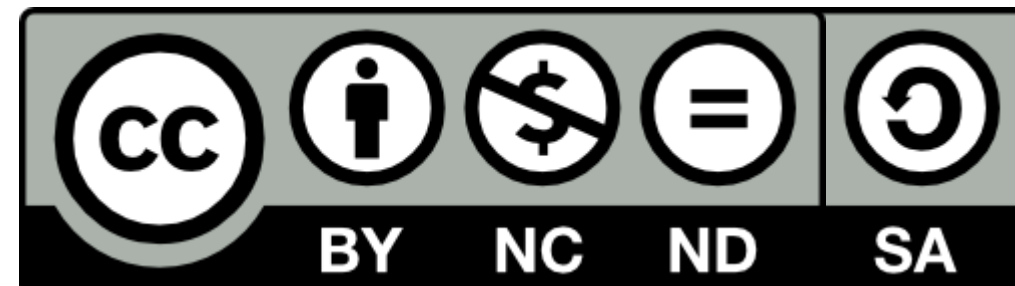
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What does CC-BY-NC-ND-SA stand for?




Combination of “NoDerivatives” and “ShareAlike” doesn’t make sense. CC-BY-NC-ND-SA doesn’t exist.

BY  – Credit must be given to the creator

NC  – Only noncommercial uses of the work are permitted

ND  – No derivatives or adaptations of the work are permitted

SA  – Adaptations must be shared under the same terms

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In the software world, other licenses are more popular, historically grown.

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GNU
General
Public
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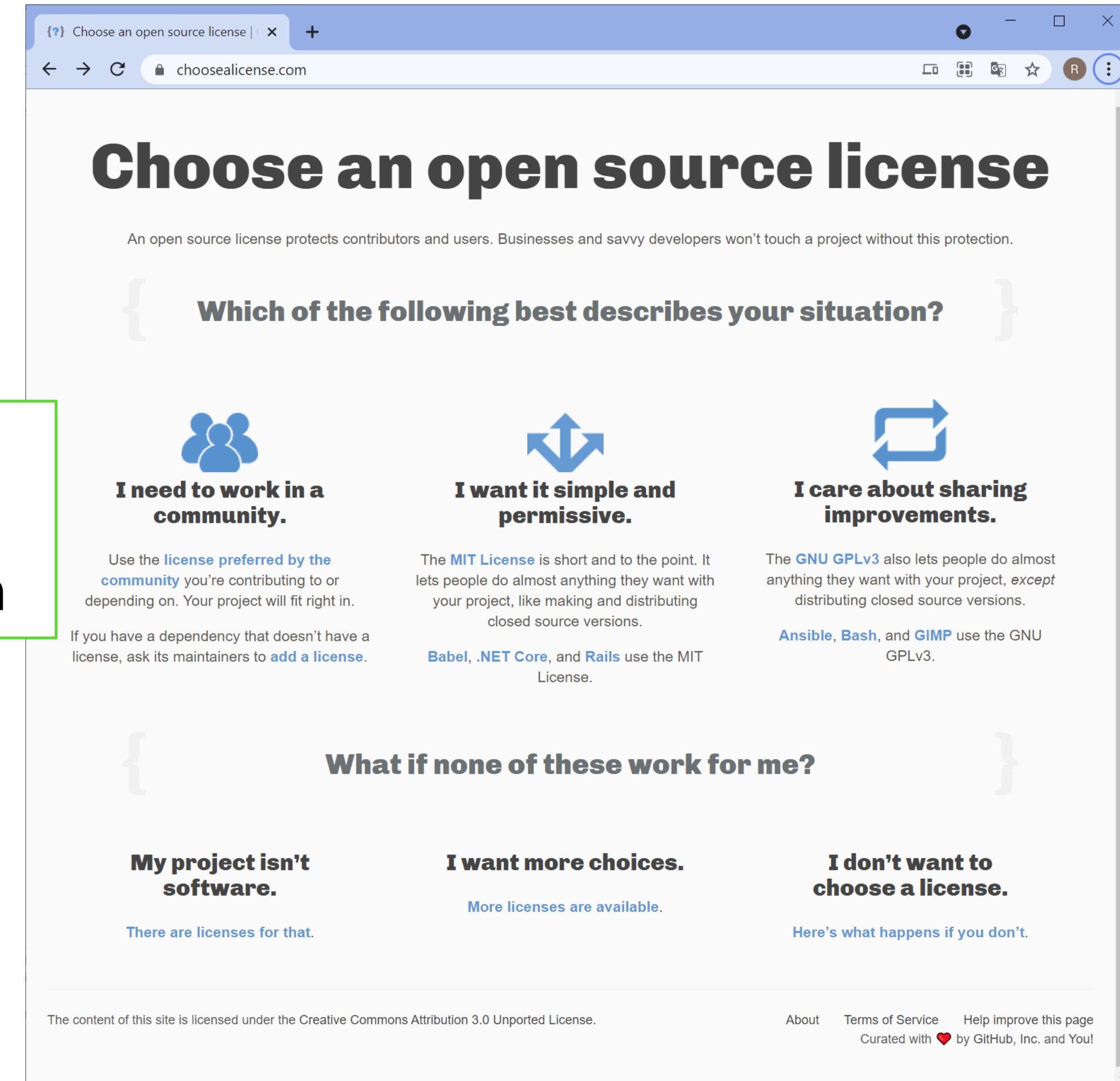
LGPL

Apache

BSD

Berkley
Software
Distribution

MIT



The screenshot shows the homepage of the 'choosealicense.com' website. The browser's address bar displays 'choosealicense.com'. The main heading is 'Choose an open source license'. Below it, a subtext reads: 'An open source license protects contributors and users. Businesses and savvy developers won't touch a project without this protection.' A section titled 'Which of the following best describes your situation?' offers three options, each with an icon and a brief description: 1. 'I need to work in a community.' (Icon: three people) - 'Use the license preferred by the community you're contributing to or depending on. Your project will fit right in. If you have a dependency that doesn't have a license, ask its maintainers to add a license.' 2. 'I want it simple and permissive.' (Icon: double-headed arrow) - 'The MIT License is short and to the point. It lets people do almost anything they want with your project, like making and distributing closed source versions. Babel, .NET Core, and Rails use the MIT License.' 3. 'I care about sharing improvements.' (Icon: circular arrow) - 'The GNU GPLv3 also lets people do almost anything they want with your project, except distributing closed source versions. Ansible, Bash, and GIMP use the GNU GPLv3.' A second section titled 'What if none of these work for me?' offers three more options: 1. 'My project isn't software.' - 'There are licenses for that.' 2. 'I want more choices.' - 'More licenses are available.' 3. 'I don't want to choose a license.' - 'Here's what happens if you don't.' The footer contains the Creative Commons Attribution 3.0 Unported License notice, links for 'About', 'Terms of Service', and 'Help improve this page', and a note 'Curated with ❤ by GitHub, Inc. and You!'.

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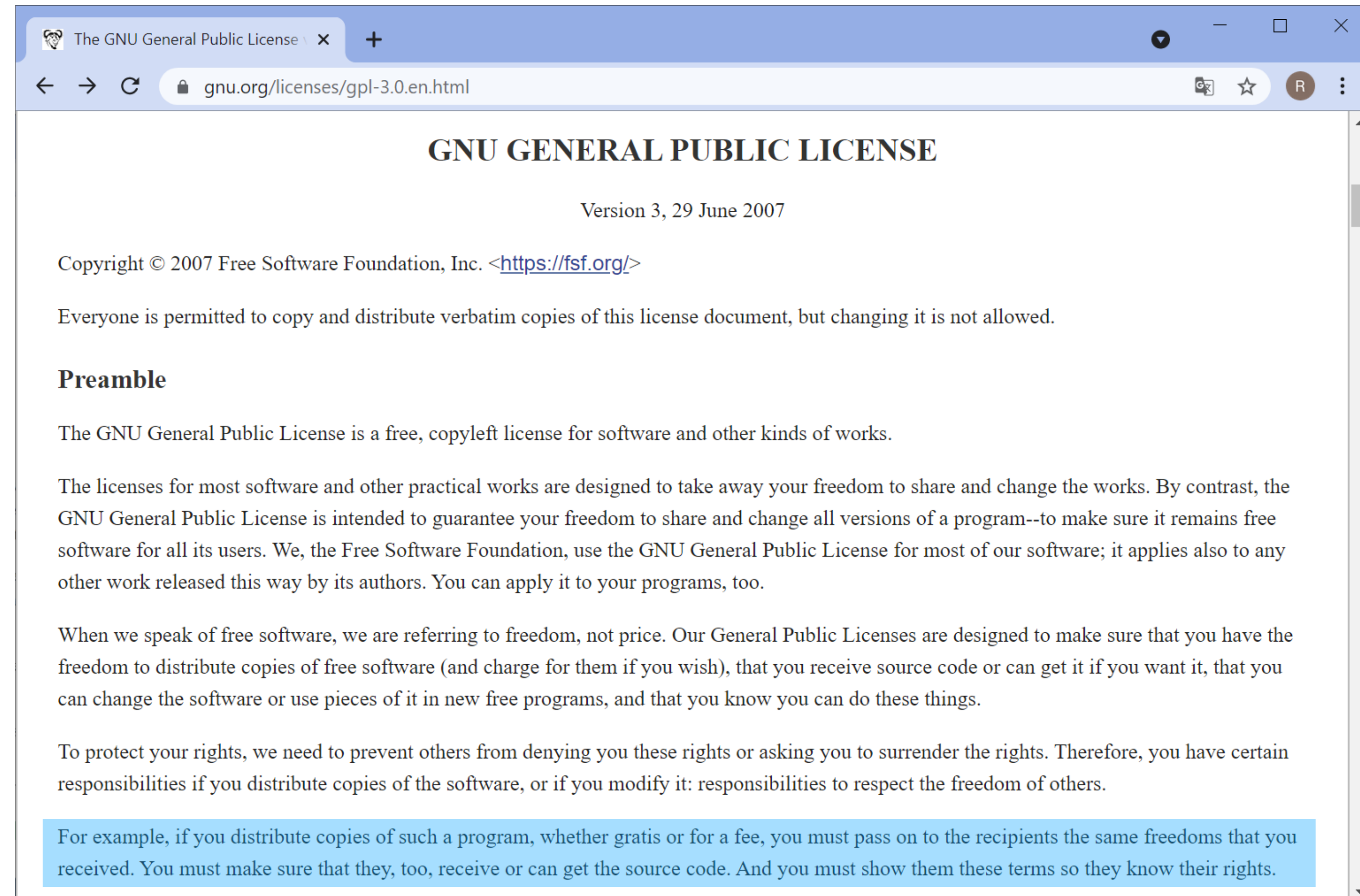
GPL

- Derivatives must also be GPL-licensed

“Restrictive”
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 - Integrate LGPL-licensed code into not-LGPL-licensed code



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Similar to CC-BY

*You have to
acknowledge the
copyright holder.*

How/when to decide for a license

How?

- Choose a license compatible with your ecosystem

When?

- When the project starts
- As early as possible
- Changing the license later may be hard.
- Beware: Your employer might be the copyright holder. They have the final word on how to license, publish and make accessible your work!

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Funding

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Open Source

Proprietary







Editing the Wiki

Discuss

Explore

Project summary

The following table summarizes the dominant license of each project's components.

Basics				Required*			Permitted*						
Logo	Project	License	Type	Disclose source	License and copyright notice	State changes	Commercial use	Distribution	Modification	Patent grant	Private use	Hold liable	Sublicensing
ImageJ													
	ImageJ	Disclaimer	Public Domain†	✗	✗	✗	✓	✓	✓	-	✓	✗	✓
ImageJ2 software stack													
	SciJava	License											
	ImgLib2	License											
			BSD-2	✗	✓	✗	✓	✓	✓	-	✓	✗	-
	ImageJ2	License											
	SCIFIO	License											
Fiji projects													
	Fiji	Licenses											
	BigDataViewer	License	GPL	✓	✓	✓	✓	✓	✓	✓	✓	✗	✗
	TrakEM2	Readme											

Page contents

Project summary

Exceptions

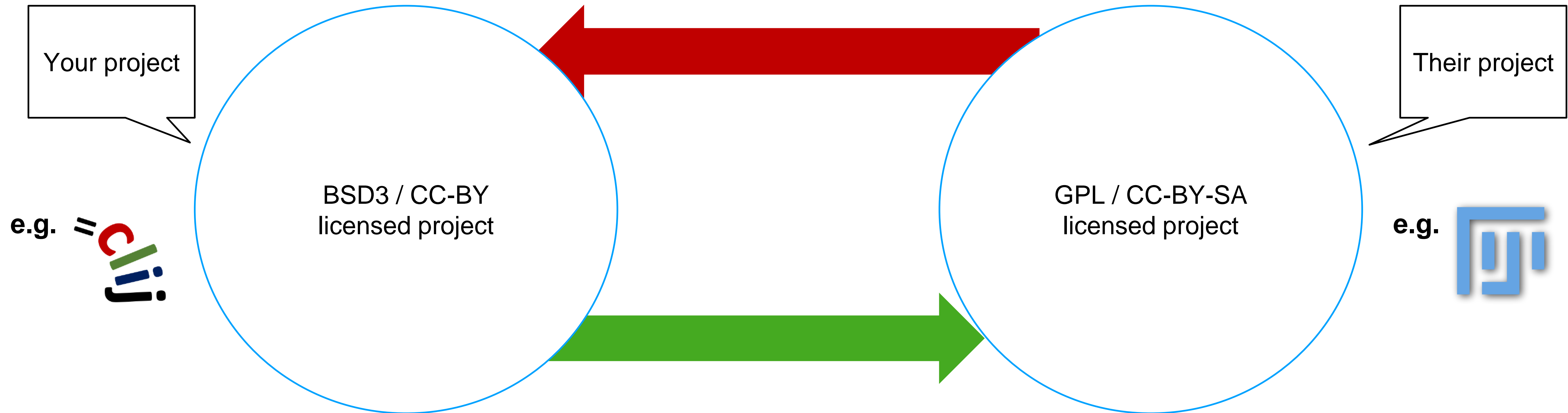
A note about ImageJ

Developers: How to use this page

Permissive versus restrictive

Use a license which

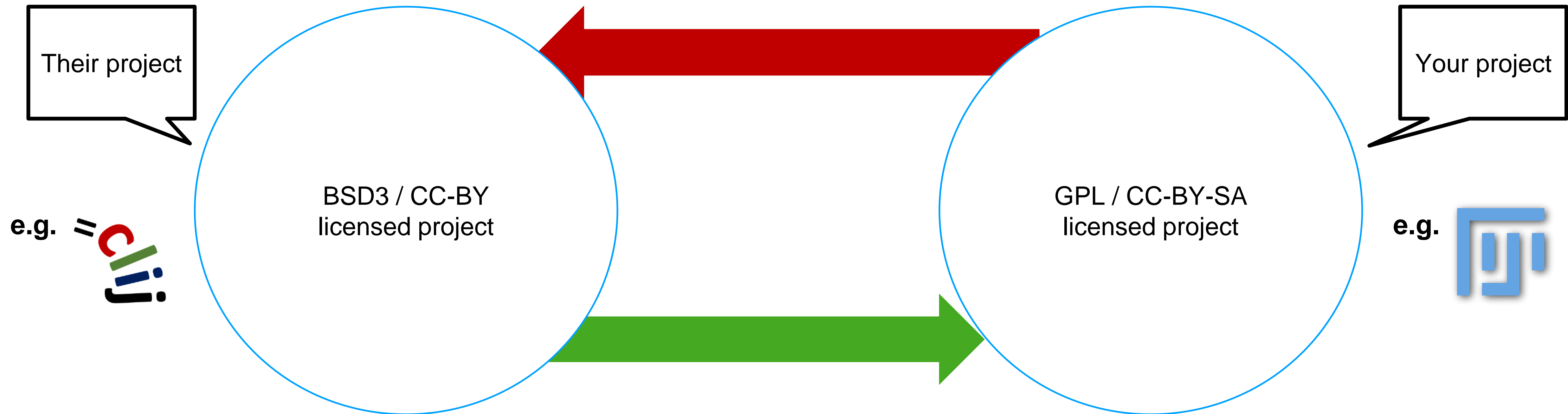
- is compatible to other projects you're collaborating with and
- fits to your needs / role.



Permissive versus restrictive

Use a license which

- is compatible to other projects you're collaborating with and
- fits to your needs / role.



Take home message

- If you share material (openly or not)

license it

and it'll be harder to steal it