pubmatter

A typst library for parsing and showing publication frontmatter

Rowan Cockett[1,2] 🆔 🔗 ✉

¹Curvenote Inc., ²Executable Books

Abstract

Utilities for loading and working with authors, affiliations, abstracts, keywords and other frontmatter information common in scientific publications.

Our goal is to introduce standardized ways of working with this content to expose metadata to scientific publishers who are interested in using typst in a standardized way. The specification for this pubmatter is based on MyST Markdown and Quarto, and can load their YAML files directly.

Keywords typst package, open-science, standards

Loading Frontmatter

The frontmatter can contain all information for an article, including title, authors, affiliations, abstracts and keywords. These are then normalized into a standardized format that can be used with a number of `show` functions like `show-authors`. For example, we might have a YAML file that looks like this:

```yaml
author: Rowan Cockett
date: 2024/01/26
```

You can load that file with `yaml`, and pass it to the `load` function:

```
#let fm = pubmatter.load(yaml("pubmatter.yml"))
```

This will give you a normalized data-structure that can be used with the `show` functions for showing various parts of a document.

You can also use a `dictionary` directly:

```
#let fm = load((
  author: (
    (
      name: "Rowan Cockett",
      email: "rowan@curvenote.com",
      orcid: "0000-0002-7859-8394",
      affiliations: "Curvenote Inc.",
    ),
  ),
  date: datetime(year: 2024, month: 01, day: 26),
  doi: "10.1190/tle35080703.1",
))
#show-author-block(fm)
```

Rowan Cockett[1] 🆔 ✉

¹Curvenote Inc.

Theming

The theme including color and font choice can be set using the `THEME` state. For example, this document has the following theme set:

```
#let theme = (color: red.darken(20%), font: "Noto Sans")
#set page(header: pubmatter.show-page-header(theme: theme, fm), footer: pubmatter.show-page-footer(fm))
#state("THEME").update(theme)
```

Note that for the `header` the theme must be passed in directly. This will hopefully become easier in the future, however, there is a current bug that removes the page header/footer if you set this above the `set page`. See #2987.

The `font` option only corresponds to the frontmatter content (abstracts, title, header/footer etc.) allowing the body of your document to have a different font choice.

Normalized Frontmatter Object

The frontmatter object has the following normalized structure:

```
title: content
subtitle: content
short-title: string           # alias: running-title, running-head
# Authors Array
# simple string provided for author is turned into ((name: string),)
authors:                      # alias: author
  - name: string
    url: string               # alias: website, homepage
    email: string
    phone: string
    fax: string
    orcid: string             # alias: ORCID
    note: string
    corresponding: boolean    # default: `true` when email set
    equal-contributor: boolean  # alias: equalContributor, equal_contributor
    deceased: boolean
    roles: string[]           # must be a contributor role
    affiliations:             # alias: affiliation
      - id: string
        index: number
# Affiliations Array
affiliations:                 # alias: affiliation
  - string                    # simple string is turned into (name: string)
  - id: string
    index: number
    name: string
    institution: string       # use either name or institution
# Other publication metadata
open-access: boolean
license:                      # Can be set with a SPDX ID for creative commons
  id: string
  url: string
  name: string
doi: string                   # must be only the ID, not the full URL
date: datetime                # validates from 'YYYY-MM-DD' if a string
citation: content
# Abstracts Array
# content is turned into ((title: "Abstract", content: string),)
abstracts:                    # alias: abstract
  - title: content
    content: content
```

Note that you will usually write the affiliations directly in line, in the following example, we can see that the output is a normalized affiliation object whtat is linked by the `id` of the affiliation (just the name if it is a string!).

```typst
#let fm = load((
  authors: (
    (
      name: "Rowan Cockett",
      affiliations: "Curvenote Inc.",
    ),
    (
      name: "Steve Purves",
      affiliations: ("Executable Books", "Curvenote Inc."),
    ),
  ),
))
#raw(lang:"yaml", yaml.encode(fm))
```

```yaml
authors:
- name: Rowan Cockett
  affiliations:
  - id: Curvenote Inc.
    index: 1
- name: Steve Purves
  affiliations:
  - id: Executable Books
    index: 2
  - id: Curvenote Inc.
    index: 1
affiliations:
- name: Curvenote Inc.
  id: Curvenote Inc.
  index: 1
- name: Executable Books
  id: Executable Books
  index: 2
date: 'datetime(year: 2024, month: 1, day: 29)'
citation: Cockett & Purves, 2024
```

API Documentation

pubmatter

doi-link

Create a DOI link

```
#doi-link(doi: "10.1190/tle35080703.1")
```
> https://doi.org/10.1190/tle35080703.1

Parameters

doi-link(doi: `str`) -> `content`

doi   `str`

Only include the DOI identifier, not the URL

Default: `none`

email-link

Create a mailto link with an email icon

```
#email-link(email: "rowan@curvenote.com")
```
> ✉

Parameters

email-link(email: `str`) -> `content`

email   `str`

Email as a string

Default: `none`

github-link

Create a link to a GitHub profile with the GitHub icon.

```
#github-link(github: "rowanc1")
```


Parameters

github-link(github: `str`) -> `content`

github `str`

GitHub username (no @)

Default: `none`

open-access-link

Create a link to Wikipedia with an OpenAccess icon.

```
#open-access-link()
```


Parameters

open-access-link() -> `content`

orcid-link

Create a ORCID link with an ORCID logo

```
#orcid-link(orcid: "0000-0002-7859-8394")
```


Parameters

orcid-link(orcid: `str`) -> `content`

orcid `str`

Use an ORCID identifier with no URL, e.g. `0000-0000-0000-0000`

Default: `none`

show-abstract-block

Show abstract-block

```
#show-abstract-block(fm)
```

Abstract

Utilities for loading and working with authors, affiliations, abstracts, keywords and other frontmatter information common in scientific publications.

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Keywords   typst package, open-science, standards

Parameters

show-abstract-block(fm: `fm`) -> `content`

fm   `fm`

The frontmatter object

show-abstracts

Show abstracts

```
#show-abstracts(fm)
```

Abstract

Utilities for loading and working with authors, affiliations, abstracts, keywords and other frontmatter information common in scientific publications.

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Parameters

show-abstracts(fm: `fm`) -> `content`

fm   `fm`

The frontmatter object

show-affiliations

Show affiliations

```
#show-affiliations(affiliations)
```

[1]Curvenote Inc., [2]Executable Books

Parameters

show-affiliations(
  size: `length` ,
  fill: `color` ,
  affiliations: `fm` `array`
) -> `content`

size   `length`

Size of the affiliations text

Default: `8pt`

fill   `color`

Color of of the affiliations text

Default: `gray`.`darken`(`50%`)

affiliations   `fm` or `array`

The frontmatter object or affiliations directly

show-author-block
Show author block

```
#show-author-block(fm)
```

Rowan Cockett[1,2] 🆔 🐙 ✉

[1]Curvenote Inc., [2]Executable Books

Parameters

show-author-block(fm: `fm`) -> `content`

fm   `fm`

The frontmatter object

show-authors
Show authors

```
#show-authors(authors)
```

Rowan Cockett[1,2] 🆔 🐙 ✉

Parameters

show-authors(
  size: `length` ,
  weight: `weight` ,
  show-affiliations: `boolean` ,
  show-orcid: `boolean` ,
  show-email: `boolean` ,
  show-github: `boolean` ,
  authors: `fm` `array`
) -> `content`

---

size `length`

Size of the author text

Default: `10pt`

---

weight `weight`

Weight of the author text

Default: `"semibold"`

---

show-affiliations `boolean`

Show affiliations text

Default: `true`

---

show-orcid `boolean`

Show orcid logo

Default: `true`

---

show-email `boolean`

Show email logo

Default: `true`

---

show-github `boolean`

Show github logo

Default: `true`

---

authors `fm` or `array`

The frontmatter object or authors directly

---

show-copyright
Show copyright

Function chose a short citation with the copyright year followed by the license text. If the license is a Creative Commons License, additional explainer text is shown.

```
#show-copyright(fm)
```

Parameters

show-copyright(fm: `fm`) -> `content`

fm `fm`

The frontmatter object

show-keywords

Show keywords

```
#show-keywords(fm)
```

Keywords typst package, open-science, standards

Parameters

show-keywords(fm: `fm`) -> `content`

fm `fm`

The frontmatter object

show-license-badge

Show license badge

Works for creative common license and other license.

```
#show-license-badge(load((license: "CC0")))
```

ⓒ⓪

```
#show-license-badge(load((license: "CC-BY-4.0")))
```

ⓒ①

```
#show-license-badge(load((license: "CC-BY-NC-4.0")))
```

ⓒ①⑤

```
#show-license-badge(load((license: "CC-BY-NC-ND-4.0")))
```

ⓒ①⑤⊜

Parameters

show-license-badge(
  color,
  fm: `fm`
) -> `content`

> **fm**   `fm`
>
> The frontmatter object

show-page-footer
Show page footer

```
#show-page-footer(fm)
```

Parameters

show-page-footer(fm: `fm`) -> `content`

> **fm**   `fm`
>
> The frontmatter object

show-page-header
Show page header

```
#show-page-header(theme: (font: "Noto Sans"), fm)
```

Parameters

show-page-header(
  theme: `theme` ,
  fm: `fm`
) -> `content`

> **theme**   `theme`
>
> The theme object, There is a bug in the first page state update, so theme must be passed directly. See #2987
>
> Default: `THEME`

> **fm**   `fm`
>
> The frontmatter object

show-spaced-content
Create a spaced content array separated with a `spacer`.

The default spacer is | , and undefined elements are removed.

```
#show-spaced-content(("Hello", "There"))
```
> Hello | There

Parameters

show-spaced-content(
  spacer: `content` ,
  content: `array`
) -> `content`

---

spacer   `content`

How to join the content

Default: `text`(`fill: gray`)[`#h`(`8pt`) | `#h`(`8pt`)]

---

content   `array`

The various things to going together

---

show-title
Show title

`#show-title`(`fm`)

> # pubmatter
>
> A typst library for parsing and showing publication frontmatter

Parameters

show-title(fm: `fm`) -> `content`

---

fm   `fm`

The frontmatter object

---

show-title-block
Show title block

`#show-title-block`(`fm`)

> # pubmatter
>
> A typst library for parsing and showing publication frontmatter
>
> **Rowan Cockett**[1,2] ⬥ ⬥ ✉
>
> [1]Curvenote Inc., [2]Executable Books

Parameters

show-title-block(fm: `fm`) -> `content`

---

fm   `fm`

The frontmatter object

---

validate-frontmatter

- show-citation()

show-citation

Create a short citation in APA format, e.g. Cockett et al., 2023

Parameters

```
show-citation(
  show-year: boolean ,
  fm: fm
) -> content
```

show-year   `boolean`

Include the year in the citation

Default: `true`

fm   `fm`

The frontmatter object