

# pubmatter

A typst library for parsing, normalizing and showing publication frontmatter

Rowan Cockett<sup>1,2</sup>  

<sup>1</sup>Curvenote Inc., <sup>2</sup>Executable 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:

```
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.yaml"))
```

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<sup>1</sup>  

<sup>1</sup>Curvenote 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")
#state("THEME").update(theme)
#set page(header: pubmatter.show-page-header(fm), footer: pubmatter.show-page-footer(fm))
```

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 that is linked by the `id` of the affiliation (just the name if it is a string!).

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

```
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: 2025, month: 1, day: 29)'
citation: Cockett & Purves, 2025
```

## API Documentation

### pubmatter

- [doi-link\(\)](#)
- [email-link\(\)](#)
- [github-link\(\)](#)
- [open-access-link\(\)](#)
- [orcid-link\(\)](#)
- [show-abstract-block\(\)](#)
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- [show-page-header\(\)](#)
- [show-spaced-content\(\)](#)
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- [show-title-block\(\)](#)

### 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 including all abstracts and keywords

`#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 all abstracts (e.g. abstract, plain language summary)

`#show-abstracts(fm)`

### Abstract

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## Parameters

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

The frontmatter object

## show-affiliations

Show affiliations

`#show-affiliations(affiliations)`

<sup>1</sup>Curvenote Inc., <sup>2</sup>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, including author, icon links (e.g. ORCID, email, etc.) and affiliations

`#show-author-block(fm)`**Rowan Cockett**<sup>1,2</sup>  <sup>1</sup>Curvenote Inc., <sup>2</sup>Executable Books

## Parameters

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

The frontmatter object

## show-authors

Show authors

`#show-authors(authors)`**Rowan Cockett**<sup>1,2</sup>  



## 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)
```

Copyright © 2024 Cockett. This is an open-access article distributed under the terms of the [Creative Commons Attribution 4.0 International](#) license, which enables reusers to distribute, remix, adapt, and build upon the material in any medium or format, so long as attribution is given to the creator.

### 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")))
```



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



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



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



### Parameters

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

**fm** fm

The frontmatter object

**show-page-footer**

Show page footer

Default is the venue, date and page numbers

#show-page-footer(fm)

Typst Package | January 26, 2024

11 of 13

**Parameters**

show-page-footer(fm: fm) -&gt; content

**fm** fm

The frontmatter object

**show-page-header**

Show page header

Default an open-access badge and the DOI and then the running-title and citation

#show-page-header(fm)

pubmatter | Cockett, 2024

**Parameters**

show-page-header(fm: fm) -&gt; content

**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 and subtitle

`#show-title(fm)`

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**Parameters**

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

**fm** `fm`

The frontmatter object

**show-title-block**

Show title block - title, authors and affiliations

`#show-title-block(fm)`

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**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