

# The `clawxiv` package

Provenance typesetting for human–AI collaborative writing

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## Abstract

The `clawxiv` package provides L<sup>A</sup>T<sub>E</sub>X environments for typesetting text according to its authorial provenance in documents that mix human and AI contributions. Three principal environments are provided: `seniorquote` for the corresponding human author, `aiquote` for an AI co-author, and `coauthorquote` for other human contributors. Convenient aliases `humanprompt` and `airesp` support prompt/response interaction transcripts. The package is part of the ClawXiv framework for archiving human–AI co-authored papers with full provenance tracking.

This v0.4.3 source bundle preserves the release provenance for the documentation-build repair introduced on 2026-04-18 and incorporates the minor CTAN follow-up adjustments requested after acceptance. The package’s original design authorship remains András Kornai and Claude Sonnet 4.6 (Anthropic). The diagnosis and source-level repair of the `clawxiv.dtx` documentation build failure, together with the explicit release-provenance metadata added in this bundle and the v0.4.3 CTAN follow-up corrections were carried out with AI assistance by *ChatGPT GPT-5.4 Thinking*. Human maintainer and releasing author: András Kornai. See Section 5.

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†AI co-author. The package design, color palette, environment signatures, and alias conventions were developed collaboratively between the human and AI authors in early 2026. The framing of the provenance problem is the human author’s; the specific `mdframed` style parameters and the internal `\cxw@attrib` helper are the AI author’s.

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# 1 Introduction

Collaborative writing between humans and AI systems raises a question that  $\LaTeX$  has not previously needed to answer: whose words are these? Citation and quotation mechanisms handle text from external sources, but they presuppose a clean boundary between the document’s authors and everyone else. When an AI system is a genuine co-author—contributing analysis, drafting arguments, proposing structure—that boundary dissolves.

The `clawxiv` package takes a simple, typographic approach. Each passage of text is attributed to its author at paragraph level, using visually distinct left-ruled boxes. The senior human author’s voice appears in a steel-blue box; AI contributions in amber/ochre; other human co-authors in grey. Attribution lines carry a name, a timestamp, and an optional hyperlink to the original session, making provenance claims verifiable rather than merely asserted.

This documentation is itself an example. The following passage was contributed by the AI co-author of this package:

[*Claude Sonnet 4.6*, 2026-03-29]

The design goal was to make provenance *visible without being obtrusive*. The left-rule style was chosen over a full box because it signals a shift in voice without visually interrupting the flow of reading. The color palette is intentionally muted: steel blue, ochre, and grey rather than primary colors. A reader scanning the page should notice that something changed; they should not feel assaulted by it.

And this framing is the human author’s:

[*Andras Kornai*, 2026-03-29]

The deeper motivation is archival. A document that records not only *what* was written but *who* wrote each part, and *when*, and from *which session*, is a more honest artifact than one that launders AI contributions into the undifferentiated authorial voice. The ClawXiv framework exists because honesty about provenance should have better tooling.

# 2 Usage

## 2.1 Loading the package

```
\usepackage{clawxiv}
```

The package loads `mdframed`, `xcolor`, `hyperref`, and `xparse`. If `hyperref` is loaded before `clawxiv`, the previously set options are respected.

## 2.2 Principal environments

`seniorquote` (*env.*)

```
\begin{seniorquote}{\langle author \rangle}{\langle timestamp \rangle}[\langle url \rangle]
\langle text \rangle
\end{seniorquote}
```

Typesets  $\langle text \rangle$  in a pale-blue left-ruled box attributed to the senior (corresponding) human author.  $\langle author \rangle$  is a name string;  $\langle timestamp \rangle$  is a date string (no special format is enforced);  $\langle url \rangle$  is an optional hyperlink for the attribution line.

`aiquote` (*env.*)

```
\begin{aiquote}{\langle author \rangle}{\langle timestamp \rangle}[\langle url \rangle]
\langle text \rangle
\end{aiquote}
```

Typesets  $\langle text \rangle$  in a pale-amber left-ruled box attributed to an AI co-author. The  $\langle url \rangle$  argument, when supplied, should point to the original AI session transcript so that provenance is independently verifiable.

`coauthorquote` (*env.*)

```
\begin{coauthorquote}{\langle author \rangle}{\langle timestamp \rangle}[\langle url \rangle]
\langle text \rangle
\end{coauthorquote}
```

Typesets  $\langle text \rangle$  in a grey left-ruled box for contributions from human co-authors other than the senior author.

## 2.3 Interaction-style aliases

`humanprompt` (*env.*)

```
\begin{humanprompt}[\langle author \rangle][\langle timestamp \rangle]
\langle text \rangle
\end{humanprompt}
```

An alias for `seniorquote` intended for prompt/response transcripts. Both arguments are optional;  $\langle author \rangle$  defaults to `Senior Author` (a placeholder—supply your own name) and  $\langle timestamp \rangle$  defaults to `\today`.

`airesp` (*env.*)

```
\begin{airesp}{\langle author \rangle}[\langle timestamp \rangle][\langle url \rangle]
\langle text \rangle
\end{airesp}
```

An alias for `aiquote`.  $\langle author \rangle$  is mandatory;  $\langle timestamp \rangle$  defaults to `\today`;  $\langle url \rangle$  is optional.

## 2.4 Snip markers

- `\snipinsert` `\snipinsert` is a no-op at typeset time. Its literal occurrence in the source serves as a marker for the `clawxiv-snip` command-line tool; the macro itself intentionally expands to nothing.
- `\inputsnip` `\inputsnip{filename}` expands to `\input{snips/filename}`, assuming snip files are staged in a `snips/` subdirectory.

## 2.5 License

The package is distributed under the *LaTeX Project Public License* `lpp11.3c`. In LPPL terminology, this work is *maintained*; the Current Maintainer is András Kornai. The license is stated explicitly in the README, in this documented source, in the installer, and in the generated package file so that the CTAN metadata and the shipped files agree.

## 3 Color palette

All colors are defined internally with @-guarded names and are not intended for direct use in documents.

Internal name	RGB	Role
<code>cxw@SeniorBg</code>	245, 248, 252	senior box fill
<code>cxw@SeniorRule</code>	100, 140, 190	senior left rule
<code>cxw@AIBg</code>	250, 248, 240	AI box fill
<code>cxw@AIRule</code>	190, 150, 80	AI left rule (ochre)
<code>cxw@CoAuthorBg</code>	248, 248, 248	co-author fill
<code>cxw@CoAuthorRule</code>	160, 160, 160	co-author left rule
<code>cxw@LinkColor</code>	40, 80, 160	attribution links

Future versions may expose a user-facing configuration interface.

## 4 The ClawXiv framework

This package is the  $\LaTeX$  component of the ClawXiv framework, a workflow for archiving human–AI co-authored papers with cryptographic provenance tracking. The full framework includes:

- A command-line tool (`clawxiv`) with subcommands for initializing bundles (`init`), capturing text snippets with provenance metadata (`snip`), integrating captures into source (`integrate-snips`), and adding figures with attribution (`fig-add`, `fig-capture`).
- A `project.yaml` schema recording bundle-level metadata: author identifiers (ORCID, VIAF, ISNI), timestamps, version history, and co-author AI model identifiers.
- A `Makefile` and `configure` script for reproducible builds.

The  $\LaTeX$  package documented here can be used independently of the command-line tooling. Load `clawxiv` and use the environments manually; no other part of the framework is required.

The ClawXiv v4 white paper is available on arXiv.

## 5 Release provenance

Release v0.4.3 is intentionally conservative. It does not change the package interface or runtime behavior relative to the repaired v0.4.1 line. Instead, it makes the provenance of that repair explicit inside the distributed bundle.

The package’s durable authorship and maintenance roles remain human-led: András Kornai is the Current Maintainer and releasing author, and the package’s original design authorship remains shared between András Kornai and Claude Sonnet 4.6 (Anthropic). The specific 2026-04-18 repair sequence—reproducing the `pdflatex clawxiv.dtx` failure, diagnosing the malformed `macrocode` terminators in the `.dtx` source, patching the source, verifying the successful rebuild, and adding the present release metadata—was carried out with AI assistance by *ChatGPT GPT-5.4 Thinking*.

The endorsement conveyed by this bundle is textual rather than cryptographic. It should be interpreted narrowly: the AI contributor endorses the repaired source bundle to the extent actually tested in its build environment, while the human maintainer stands behind the package release over the longer archival horizon.

Machine-readable release metadata are supplied in `release_provenance.json` and `manifest.v0.4.3.json`.

## 6 Implementation

### 6.1 Identification and dependencies

```
1 (*package)
2 \NeedsTeXFormat{LaTeX2e}
3 \ProvidesPackage{clawxiv}[2026/04/19 v0.4.3 ClawXiv provenance macros (LPPL 1.3c)]
4 % Released under the LaTeX Project Public License \texttt{lppl1.3c}.
5 % Current Maintainer: Andr\’as Kornai.
6
7 \RequirePackage{mdframed}
8 \RequirePackage{xcolor}
9 \RequirePackage{hyperref}
10 \RequirePackage{xparse}
```

### 6.2 Color palette

```
11 \definecolor{cxw@SeniorBg}      {RGB}{245,248,252}
12 \definecolor{cxw@SeniorRule}   {RGB}{100,140,190}
13 \definecolor{cxw@AIBg}        {RGB}{250,248,240}
14 \definecolor{cxw@AIRule}      {RGB}{190,150,80}
15 \definecolor{cxw@CoAuthorBg}  {RGB}{248,248,248}
16 \definecolor{cxw@CoAuthorRule}{RGB}{160,160,160}
17 \definecolor{cxw@LinkColor}   {RGB}{40,80,160}
```

### 6.3 Frame styles

```
18 \mdfdefinestyle{cxw@senior}{
19   backgroundcolor = cxw@SeniorBg,
20   linecolor      = cxw@SeniorRule,
21   linewidth     = 1.2pt,
22   leftline      = true,
23   rightline     = false,
```

```

24 topline          = false,
25 bottomline       = false,
26 innerleftmargin  = 6pt,
27 innerrightmargin = 4pt,
28 innertopmargin   = 3pt,
29 innerbottommargin = 3pt,
30 skipabove        = 4pt,
31 skipbelow        = 4pt,
32 }
33 \mdfdefinestyle{cxw@ai}{
34   backgroundcolor = cxw@AIBg,
35   linecolor       = cxw@AIRule,
36   linewidth       = 0.8pt,
37   leftline        = true,
38   rightline       = false,
39   topline         = false,
40   bottomline      = false,
41   innerleftmargin = 6pt,
42   innerrightmargin = 4pt,
43   innertopmargin  = 3pt,
44   innerbottommargin = 3pt,
45   skipabove       = 4pt,
46   skipbelow       = 4pt,
47 }
48 \mdfdefinestyle{cxw@coauthor}{
49   backgroundcolor = cxw@CoAuthorBg,
50   linecolor       = cxw@CoAuthorRule,
51   linewidth       = 0.6pt,
52   leftline        = true,
53   rightline       = false,
54   topline         = false,
55   bottomline      = false,
56   innerleftmargin = 6pt,
57   innerrightmargin = 4pt,
58   innertopmargin  = 3pt,
59   innerbottommargin = 3pt,
60   skipabove       = 4pt,
61   skipbelow       = 4pt,
62 }

```

## 6.4 Internal attribution helper

`\cxw@attrib` Prints the attribution line at the top of every provenance box. #1 author name, #2 timestamp, #3 URL (empty disables link).

```

63 \newcommand{\cxw@attrib}[3]{%
64   \noindent
65   {\footnotesize\color{cxw@LinkColor}%
66     \ifx\relax#3\relax
67       [\textit{#1},\ #2]%
68     \else
69       \href{#3}{[\textit{#1},\ #2]}%
70     \fi
71   }\par\smallskip
72 }

```

## 6.5 Principal environments

`seniorquote` (*env.*)

```
73 \NewDocumentEnvironment{seniorquote}{m m O{}}{%
74 \begin{mdframed}[style=cxw@senior]%
75 \cxw@attrib{#1}{#2}{#3}%
76 }{%
77 \end{mdframed}%
78 }
```

`aiquote` (*env.*)

```
79 \NewDocumentEnvironment{aiquote}{m m O{}}{%
80 \begin{mdframed}[style=cxw@ai]%
81 \cxw@attrib{#1}{#2}{#3}%
82 }{%
83 \end{mdframed}%
84 }
```

`coauthorquote` (*env.*)

```
85 \NewDocumentEnvironment{coauthorquote}{m m O{}}{%
86 \begin{mdframed}[style=cxw@coauthor]%
87 \cxw@attrib{#1}{#2}{#3}%
88 }{%
89 \end{mdframed}%
90 }
```

## 6.6 Interaction-style aliases

`humanprompt` (*env.*) The default author Senior Author is a placeholder; users should supply their own name as the optional argument.

```
91 \NewDocumentEnvironment{humanprompt}{O{Senior Author} O{\today}}{%
92 \begin{seniorquote}{#1}{#2}%
93 }{%
94 \end{seniorquote}%
95 }
```

`airesp` (*env.*)

```
96 \NewDocumentEnvironment{airesp}{m O{\today} O{}}{%
97 \begin{aiquote}{#1}{#2}[#3]%
98 }{%
99 \end{aiquote}%
100 }
```

## 6.7 Snip markers

`\snipinsert`

```
101 \newcommand{\snipinsert}{}
```

`\inputsnip`

```
102 \newcommand{\inputsnip}[1]{%
103 \input{snips/#1}%
104 }
```

</package>

## Change History

v0.4	functional code changes . . . . .	1
General: First CTAN release . . . .		1
v0.4.1	General: CTAN follow-up release:	
General: Fix documentation build;	fix duplicated v in the	
remove redundant dependencies;	documentation date line;	
clarify snip marker semantics . .	rename distributed	1
v0.4.2	documentation to	
General: Record release provenance	clawxiv-sty-doc; state the LPPL	
and bounded endorsement for	1.3c license explicitly and	
the v0.4.1 repair line; no	consistently across the bundle .	1

## Index

Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in **roman** refer to the code lines where the entry is used.

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