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# lebhart, write your articles in a colorful way\*

JINWEN

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## ABSTRACT

lebhart is a member of the colorist class series. The entire collection includes colorart and lebhart for typesetting articles and colorbook and beaulivre for typesetting books. My original intention in designing this series was to write drafts and notes that look colorful yet not dazzling.

Among them, lebhart and beaulivre support three languages: English, French, and Chinese, and these three languages can be switched seamlessly in a single document. Due to the usage of custom fonts, they need to be compiled with Xe<sub>La</sub>TeX or Lua<sub>La</sub>TeX.

This documentation is typeset using lebhart. You can think of it as a short introduction and demonstration.

Since the main body of colorist is modified from the minimalist series, some elements have not been completely redesigned yet, especially the TOC, part and chapter style. These will be added gradually in the future versions.

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## 1 ON THE NAMING AND OPTIONS

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- lebhart is taken from German word “lebhaft” (“vividly”), combined with the first three letters of “artikel” (“article”).
- beaulivre is taken from French words “beau” (for “beautiful”) and “livre” (for “book”).

You can use the option `fast` to enable a fast but slightly rough version. The main differences are:

- Use simpler math font configuration;
- Do not use `hyperref`;
- Use draft mode for all `tcolorboxes`;
- Use `polyglossia` instead of `babel` to support multiple languages. (Using `polyglossia` will increase the compilation speed slightly, but the current compatibility with Chinese is not perfect. When it becomes more stable, I will consider fully switching to `polyglossia`)

During the writing stage of your document, it is recommended to use the `fast` option to speed up compilation and improve the smoothness of your writing experience. At the end, you can remove the “fast” mark to get the final version.

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\*Corresponding to: lebhart 2021/03/15

## 2 SOME INSTRUCTIONS

### 2.1 | Theorems and how to reference them

Environments such as definitions and theorems have been pre-defined and can be used directly, for example:

```
\begin{definition}[Strange things] \label{def: strange} ...
```

will produce

**DEFINITION 2.1** (Strange things) This is the definition of some strange objects.

**DEFINITION 2.2** (Another definition) Different definitions are automatically glued together, and there will be no gaps in between.

When referencing, you can directly use clever reference `\cref{(label name)}`. For example, `\cref{def: strange}` will be displayed as: **DEFINITION 2.1**.

The following are several other styles of theorem-like environments:

**THEOREM 2.3** Theorem style: theorem, proposition, lemma, corollary

PROOF | Proof style



Remark style



**CONJECTURE 2.1** Conjecture style

**EXAMPLE** Example style: example, fact

**PROBLEM 2.1** Problem style

### 2.2 | Define a new theorem-like environment

First define the name of this environment in the language used: `\(name of environment)(language name)`. Where `(language name)` can be EN, FR, CN, etc., and then define this environment in one of the following four ways:

- `\CreateTheorem*{(name of environment)}`
- `\CreateTheorem{(name of environment)}[(numbered like)]`
- `\CreateTheorem{(name of environment)}<(numbered within)>`
- `\CreateTheorem{(name of environment)}`

For example,

```
\def\proofideanameEN{Idea}
\CreateTheorem*{proofidea}
```

defines an unnumbered environment `proof idea`, which supports using in the English context, and the effect is as follows:

IDEA | ...

### 2.3 | Draft mark

You can use `\dnf` to mark the unfinished part. For example:

- `\dnf:` To be finished here
- `\dnf<Still need ...>:` To be finished here : Still need ...

Similarly, there is `\needgraph` :

- `\needgraph:` A graph is needed here
- `\needgraph<About ...>:` A graph is needed here : About ...

### 2.4 | Language configuration

You can use `\UseLanguage{(name of language)}` at any time to change the language, Language names include Chinese, English, French (the case of the first letter is arbitrary, for example, “chinese” is also acceptable). With this, the effects of various commands and environments will also change accordingly.

For example, after using `\UseLanguage{French}`, the theorem and the draft mark will be displayed as:

**THÉORÈME 2.4** (Inutile) Un théorème en français. À terminer ici

When referenced, the name of the theorem always matches the language of the region in which the theorem is located, for example, the definition of the beginning is still displayed in English in the current French mode : **DEFINITION 2.1** and **THÉORÈME 2.4**.

### 2.5 | On the fonts

lebhart and beaulivre use Palatino Linotype as the English font, FounderType’s YouSong and YouHei Simplified as the Chinese fonts, and partially use Neo Euler as the mathematical font:

- English main font. English sans serif font.
- 中文主要字体, 中文无衬线字体
- Math demonstration:  $\alpha, \beta, \gamma, \delta, 1, 2, 3, 4, a, b, c, d,$

$$\text{li}(x) := \int_2^{\infty} \frac{1}{\log t} dt$$

Among them, Neo Euler can be downloaded at <https://github.com/khaledhosny/euler-otf>. Other fonts are not free, you need to purchase and use them on your own. (For the Chinese fonts, visit FounderType’s website for detail: <https://www.foundertype.com>).

When the corresponding font is not installed, the font that comes with TeX Live will be used instead, and the experience might be reduced.

### 3 DOCUMENT TEMPLATES

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```
%! TEX program = xelatex
\documentclass[fast]{lebhart}

\linenumbers
\UseLanguage{French}

\begin{document}

\title{Titre}
\author{Nom}
\date{03 / 2021, Lieu}

\maketitle

%% Texte ici

\end{document}
```

```
%! TEX program = xelatex
\documentclass[fast]{lebhart}

\linenumbers
\UseLanguage{Chinese}

\begin{document}

\title{标题}
\author{姓名}
\date{2021年3月, 地点}

\maketitle

%% 正文部分

\end{document}
```

(`\UseLanguage` can be placed either in the preamble or in the body part, and can be used repeatedly as needed)