

# A simple Science Template

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This document presents a number of hints about how to set up your Science paper in L<sup>A</sup>T<sub>E</sub>X . We provide a template file, scifile.tex, that you can use to set up the L<sup>A</sup>T<sub>E</sub>X source for your article. An example of the style is the special {sciabstract} environment used to set up the abstract you see here.

## 引言

## 正文

AGI 综述相关：

近期有一些研究意识与模拟通用人工智能的文章。其中，

(Reser, 2022) 设计一套维果茨基的自主人工智能体，能够与他人互动，更重要的是，能够将这些互动内在化，将其转化为支持新认知功能发展的认知工具

TODO(Colas et al., 2022)

(Liang, 2022) 提出了一种多模态（以视觉和自然语言二模态为例）转换方式。设计了一种多模态语言学习框架：编码-> 表示空间-> 解码。此外，设计对应的多模态处理器：视听处理器、语言视觉处理器、情绪处理器、建模世界处理器（多主体强化学习相关）、内在语言视觉触觉感受器（编码后之表现形式）

因果涌现与信息论方面：

NOW(Williams et al., 2010) 提出多变量信息结构，用于测度冗余信息熵。并且以绘制冗余韦恩图或者冗余晶格图之形式描述冗余信息。

(?) 结合图灵机思想和 LSTM 方法，有效解决了长期记忆不稳定的问题。

## References and Notes

COLAS C, KARCH T, Moulin-Frier C, et al., 2022. Vygotskian Autotelic Artificial Intelligence: Language and Culture Internalization for Human-Like AI: arXiv:2206.01134[M]. [S.l.]: arXiv.

LIANG P P, 2022. Brainish: Formalizing A Multimodal Language for Intelligence and Consciousness: arXiv:2205.00001[M]. [S.l.]: arXiv.

RESER J E, 2022. A Computational Architecture for Machine Consciousness and Artificial Superintelligence: Updating Working Memory Iteratively[Z]. [S.l.: s.n.].

WILLIAMS P L, BEER R D, 2010. Nonnegative decomposition of multivariate information[J].

1. We've included in the template file scifile.tex a new environment, `{scilastnote}`, that

generates a numbered final citation without a corresponding signal in the text. This environment can be used to generate a final numbered reference containing acknowledgments, sources of funding, and the like, per Science style.

Fig. 1. Please do not use figure environments to set up your figures in the final (post-peer-review) draft, do not include graphics in your source code, and do not cite figures in the text using  $\text{\LaTeX}$  `\ref` commands. Instead, simply refer to the figure numbers in the text per Science style, and include the list of captions at the end of the document, coded as ordinary paragraphs as shown in the `scifile.tex` template file. Your actual figure files should be submitted separately.