How to Deal with the Tense of Verb in Scientific Papers?

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28/11/2019
A typical structure of a scientific paper

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<thead>
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<th>Title</th>
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| Abstract |
| Keywords |

| 1. Introduction |
| 2. Related works |
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| 5. Conclusions |

| Acknowledgments |
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where verbs may appear

The usage of the tense of the verb *varies* according to its position.
1. Title

Title is usually an incomplete sentence or phrase, generally not involving the tense of verbs (一般不涉及动词的时态).

If you have to use a verb in your title, it is recommended to use the present simple of the verb (一般现在时).

For example,
- Data management: India needs agency for energy data (Tongia R., et al, 2017)
- Compact Feature Representation for Image Classification Using ELMs (Cui D S, et al, 2017)
2. Abstract

The most common used tenses in the abstract are the present perfect and the present simple (现在完成时和一般现在时).

- The present perfect is usually used to express the existing methods and discoveries in the past research;
- The present simple is used to express the disadvantages of the existing research and introduce your motivation and contributions.

For example,
- Several recent works have shown how highly realistic human head images can be obtained by training convolutional neural networks to generate them. (Zakharov E, et al, 2019)
- However, the performance of ELM is affected due to the presence of random input weight and the model suffers from ill posed problem. (Das D, et al, 2019)
- We show that such an approach is able to learn highly realistic and personalized talking head models of new people and even portrait paintings. (Zakharov E, et al, 2019)
3. Introduction

- When reviewing other researchers’ works, it is recommended to use the past simple and the present perfect (一般过去时和现在完成时).
- When describing general facts or truths and expressing your research motivation, it is recommended to use the present simple (一般现在时).

For example,

- Zhang et al. [15] and Li et al. [16] have conducted a comprehensive study on the relationship between the parameters and the performance of RVFL and given a series of guidance for building RVFL models. (Cao W P, et al, 2017)
- Motivated by the above online sequential learning methods, this work proposes a novel classifier, OSCSELM, which is a variant of CS-ELM that uses online sequential learning approach. (Shukla S, et al, 2019)
4. Related works

- When reviewing other researchers’ works, it is recommended to use the past simple and the present perfect （一般过去时和现在完成时）.
- When describing general facts, the learning mechanism of an algorithm, the disadvantages of the existing research, it is recommended to use the present simple （一般现在时）.

For example,
- ELM was originally proposed by Huang et al. [25]–[27] for the single-hidden-layer feedforward neural networks and then extended to the generalized single-hidden-layer feedforward networks where the hidden layer need not be neuron alike [28][29]. The hidden layer parameters are randomly generated without tuning and are independent of the training data. (Zhou H M, et al, 2015)
5. The proposed method

When describing the learning mechanism of your proposed algorithm, it is recommended to use the present simple (一般现在时).

For example,

<table>
<thead>
<tr>
<th>Algorithm 1 Stacked ELMs Learning Network</th>
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| Given a large training dataset \( \mathcal{X} = \{ (x_i, t_i) | x_i \in \mathbb{R}^n, t_i \in \mathbb{R}^m, i = 1, \ldots, N \} \), activation function \( g(x) \), number of hidden nodes in each layer \( L \), number of targeted combined nodes \( L' \), regularization coefficient \( C \), and number of total layers \( S \):
| Step 1) **Apply extreme learning machine algorithm for layer 1:**
| a) Randomly generate the hidden layer parameters:
| input weight \( w_i \) and bias \( b_i, i = 1, \ldots, L \).
| b) Calculate the hidden layer output matrix \( H \).
| c) Calculate the output weight \( \beta \)
| \[ \beta = \left( \frac{1}{C} + H^T H \right)^{-1} H^T t. \] (17) |
6. Experimental results and analysis

- When analyzing the figures/tables of your experimental results and discussing the significance of your research, it is recommended to use the present simple (一般现在时).
- When discussing research findings, the past simple is usually used （一般过去时）.

For example,
- Fig 1 shows how quantum experiments with magnetic monopoles are feasible. （Béché A, et al, 2017）
- Overall, the adoption of SL criteria under the graph embedding framework for ELM-based classification clearly enhances classification performance, when compared to ELM, RELM and KELM methods. （Iosifidis A, et al, 2016）
- From our experiments, we found that there were no significant between-group differences in 90-day mortality. （Saver J L, et al, 2015）
7. Conclusions

- The past simple （一般过去时） is used to discuss the experimental methods and findings of your study.
- When making a conclusion, describing the learning mechanism of your algorithm, and summarizing the significance of your research, use the present simple（一般现在时）.
- When describing your future works, it is recommended to use the future simple.

For example,
- We presented a blind domain adaptive classification algorithm which does not require any target domain data for training and still outperforms existing state-of-the-art methods that are nonblind. The proposed AELM has good generalization abilities and performs well on different tasks such as digit recognition and object categorization as well as different feature types such as raw pixel values, SURF, DSIFT, and CNN features. (Uzair M, et al, 2017)
8. Acknowledgments

The passive voice of the present simple is usually recommended here.

For example,

This research is supported by the National Natural Science Foundation of China (61672358, 71371063) and by Basic Research Project of Knowledge Innovation Program in Shenzhen (JCYJ20150324140036825).
The passive voice of the present simple

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**Summary**

- **Title**: Generally not involving the tense of verbs
- **Abstract**: The present perfect and the present simple (现在完成时和一般现在时)
  - Use the past simple (一般过去时) and the present perfect to review others’ works;
  - Use the present simple to describe general facts/truths and express your research motivation.
  - Use the present simple to analyze the figures/tables of your experimental results and discuss the significance of your research.
  - Use the past simple to discuss your research findings.
  - Use the past simple to discuss the experimental methods.
  - Use the present simple to make a conclusion.
  - Use the future simple to describe your future works.

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**2. Related works**

**3. The proposed method**

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Thanks for your attention!