学术英语写作

Scientific Writing

第三章 英语写作

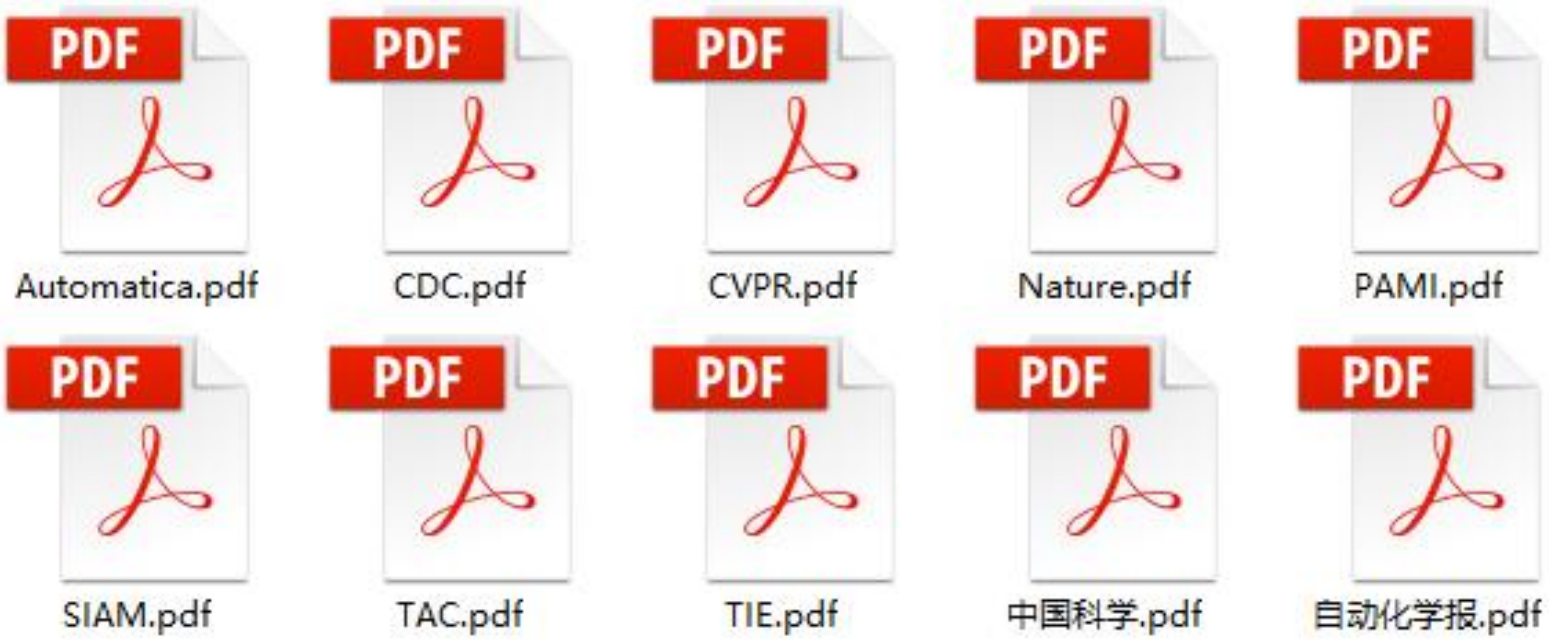
提纲

一 词汇特点

二 语法特点

三 文体特点

➢ 说一下代表作


Automatica.pdf
CDC.pdf
CVPR.pdf
Nature.pdf
PAMI.pdf
SIAM.pdf
TAC.pdf
TIE.pdf
中国科学.pdf
自动化学报.pdf

一、词汇特点

➢ 日常英语

People get natural rubber from rubber trees as a white, milky liquid, which is called latex. They mix it with acid, and dry it, and then they send it to countries all over the world. As the rubber industry grew, people needed more and more rubber. They started rubber plantations in countries with hot, wet weather conditions, but these still could not give enough raw rubber to meet the needs of growing industry.

➢ 科技英语

Natural rubber is obtained from rubber trees as a white, milky liquid known as latex. This is treated with acid and dried before being dispatched to countries all over the world. As the rubber industry developed, more and more rubber was required. Rubber plantations were established in countries with a hot, humid climate, but these still could not supply sufficient raw rubber to satisfy the requirements of developing industry.

一、词汇特点

- 专业性：科技术语较多。

- use up——exhaust
- throw back——reflect
- carry out——perform
- get rid of——eliminate
- keep up——maintain
- push into——insert
- think about——consider
- take away——remove
- finish——complete
- buy——purchase
- underwater——submarine
- enough——sufficient
- handbook——manual
- careful——cautious
- try——attempt
- get——obtain

一、词汇特点

➢ 缩略语

◘ 缩略法

expo：exposition（展览）

◘ 拼缀法

knowbot：knowledge robot（智能机器人）

◘ 首字母拼音法

TOEFL: Test of English as a Foreign Language（托福）

◘ 首字母缩略法

CD: compact disk

一、词汇特点

➢ 前后缀出现率高

- 科技英语中使用前后缀很多，出现频率也高
- 前缀：semi, auto, micro, thermo等

Searching Multi-Rate and Multi-Modal Temporal Enhanced Networks for Gesture Recognition

一、词汇特点

- 前后缀出现率高

  - 前缀：semi, auto, micro, thermo等
  - 后缀： ity, ment, ness, sion, tion, th, ure, able, ible, ant, ent, ic, ical, ive, ous等

Abstract—Gesture recognition has attracted considerable attention owing to its great potential in applications. Although the great progress has been made recently in multi-modal learning methods, existing methods still lack effective integration to fully explore synergies among spatio-temporal modalities effectively for gesture recognition. The problems are partially due to the fact that the existing manually designed network architectures have low efficiency in the joint learning of multi-modalities. In this paper, we propose the first neural architecture search (NAS)-based method for RGB-D gesture recognition. The proposed method includes two key components: 1) enhanced temporal representation via the proposed 3D Central Difference Convolution (3D-CDC) family, which is able to capture rich temporal context via aggregating temporal difference information; and 2) optimized backbones for multi-sampling-rate branches and lateral connections among varied modalities. The resultant multi-modal multi-rate network provides a new perspective to understand the relationship between RGB and depth modalities and their temporal dynamics. Comprehensive experiments are performed on three benchmark datasets (IsoGD, NvGesture, and EgoGesture), demonstrating the state-of-the-art performance in both single- and multi-modality settings. The code is available at https://github.com/ZitongYu/3DCDC-NAS.

提纲

一 词汇特点

二 语法特点

三 文体特点

二、语法特点

➢ 一般陈述句多

- 科技论文中常用的两种时态是现在时和过去时。

Abstract—Cyber-physical systems are ubiquitous in power systems, transportation networks, industrial control processes, and critical infrastructures. These systems need to operate reliably in the face of unforeseen failures and external malicious attacks. In this paper: i) we propose a mathematical framework for cyber-physical systems, attacks, and monitors; ii) we characterize fundamental monitoring limitations from system-theoretic and graph-theoretic perspectives; and ii) we design centralized and distributed attack detection and identification monitors. Finally, we validate our findings through compelling examples.

Index Terms—Cyber-physical systems, descriptor systems, distributed control, fault detection, geometric control, graph theory, networks, security.

二、语法特点

➢ 一般陈述句多

- 科技论文中常用的两种时态是现在时和过去时。

VI. Conclusion

We have analyzed fundamental monitoring limitations for cyber-physical systems under attack modeled by linear time-invariant descriptor systems with exogenous inputs. In particular, i) we have characterized undetectable and unidentifiable attacks from system-theoretic and graph-theoretic perspectives, ii) we have designed centralized and distributed monitors, and iii) we have provided illustrative examples. Future and ongoing work includes i) a detailed analysis of the convergence of our distributed monitors, ii) the design of distributed identification monitors, and iii) the design of monitors robust to system noise and unmodeled dynamics.

二、语法特点

➢ 一般陈述句多

- 科技论文中常用的两种时态是现在时和过去时。

D. Example of Detection and Identification in the Presence of Noise and Model Uncertainties

We apply our centralized attack detection and identification methods to the IEEE RTS96 power network [53]. In particular, we first consider the nominal case, in which the power network dynamics evolve as linear time-invariant descriptor system, as described in Section II. Second, we consider the case of additive state and measurement noise, and we show the robustness of the attack detection and identification monitors. Third, we consider the case of nonlinear differential-algebraic power network dynamics and show the effectiveness of our methods in the presence of unmodeled nonlinear dynamics.

二、语法特点

现在时

- 普遍认可的概念和观点-现在时（已经发表的结果通常被视为“事实”）
- “前言”- 现在时（因为其所介绍的是前人构建的知识）
- 展现数据和描述假说和原理

The newly discovered planet is at least as big as Pluto.

Most regions where this problem arises belong to category X.

二、语法特点

过去时

- 描述实验结果-过去时（因为实验已经结束，而你的结果尚未成为公认的“事实”）
- “材料和方法”以及“结论”-过去时

Higher temperatures resulted in less bud formation.

The three images were taken about 90 minutes apart.

二、语法特点

➢ 被动语态多

- 由于在科技论文中描述的都是事物、过程和现象，科技文章重在陈述客观事实，有意排除个人主观感情因素，被动句的使用就有利于实现以客观事物为主体，阐明客观事实的目的。
- 故该文体文章的主语多为非人称主语，这比较适合使用被动语态，在一定程度上提高了科技文献的客观性。

Due to the vast amount of the literature, it would be challenging to exhaustively review the existing results on formation control. Rather than an exhaustive review, we thus focus on the characterization of formation control schemes in terms of the sensing capability and the interaction topology of agents because we believe that both of them are linked to the essential features of multi-agent formation control.

The characterization of formation control schemes in terms of the sensing capability and the interaction topology naturally leads to the question of what variables are sensed and what variables are actively controlled by multi-agent systems to achieve their desired formation. The types of sensed variables specify the requirement on the sensing capability of individual agents. Meanwhile, the types of controlled variables are essentially connected to the interaction topology. Specifically, if positions of individual agents are actively controlled, the agents can move to their desired positions without interacting with each other. In the case that inter-agent distances are actively controlled, the formation of agents can be treated as a rigid body. Then the agents need to interact with

二、语法特点

➢ 被动语态多

- 施动者属于某种动物、植物或物质

The water is absorbed by the plant.

- 施动者为某一组织或机构

Large quantities of fuel are used by modern industry.

- 施动者是一种自然过程

The growth was affected by radiation.

- 施动者为某种情况或原因

The work was unaffected by the extent of the damage.

- 施动者为赖以进行动作的手段或方法，施动者除了by外，还可以由by means of引出：

The machine is powered by means of a small electric motor.

二、语法特点

➢ 简略表达多

- 科技语言所要表达的事理关系比较复杂，因此语言精炼简明显得格外重要。实践中常常用名词词组代替句子形式，用分词独立结构代替从句，用省略句代替完全句。

After it is separated……

After separating

二、语法特点

➢ 简略表达多

- 化倾向主要指广泛使用能表示动作或状态的抽象名词或起名词功用的非限定性动词。名词化可以把一个句子变成一个短语，可以使复合句变成简单句。

After it is separated……

After separation

二、语法特点

➢ 简略表达多

- 简化目的或结果状语从句

The moving parts of a machine are often oiled so that friction may be greatly reduced.

The moving parts of a machine are often oiled for great reduction of friction.

二、语法特点

➢ 简略表达多

◘ 简化名词从句

The engineer has told us where we shall drill another oil well.

The engineer has told us where to drill another oil well.

提纲

一 词汇特点

二 语法特点

三 文体特点

三、文体特点

➢ 准确Accuracy

- 要正确地运用英语的语法与句型
- 不要使用意义模棱两可的词汇和表达方式

The rest of this article is as follows. In Section 2, some concepts about uniform attractor, cocycle attractor ~~and~~ NRDS are provided. In Section 3, we will get the stochastic three-component Gray-Scott system ~~generates~~ a NRDS. In Section 4, some uniform ~~priori~~ estimates of solutions are established. In Section 5, the existence of uniform attractor is proved.

三、文体特点

- **准确Accuracy**
  - 要正确地运用英语的语法与句型
  - 不要使用意义模棱两可的词汇和表达方式
- **清楚Clear**
  - 提供明确的信息
  - 使用容易理解的词汇

However, only a few numbers of research approaches have been promoted to resolve the manifold learning problem of unaligned data [33]–[35]. Initially, multi-view Local Linear Embedding (MLLE) [33] suggests the local geometric details of each feature space as maintained by LLE criterion and acquires additional details by assigning different weights to local patches between features. It is obvious that these approaches are based on a fundamental assumption that it shares similar intra-class variational information. By defining a cross-view model, Multi-view Diffusion Mapping [34] utilizes the inherent relation within each view along with the mutual relations, while an indicated a random walk process among subjects is prevented from expecting among the different perspectives, which is robust to extension and insensitive to small structural modification among objects. Next, semi-

三、文体特点

- 准确Accuracy
  - 要正确地运用英语的语法与句型
  - 不要使用意义模棱两可的词汇和表达方式
- 清楚Clear
  - 提供明确的信息
  - 使用容易理解的词汇
- 简洁Simple
  - 限制段落的长度
  - 限制句子和所选词汇和词组的长度

I. INTRODUCTION

Image recognition or classification techniques work efficiently with controlled acquisition conditions and well-aligned images, but the dramatic appearance changes in pose, significant illumination variation, partial occlusion, as well as reduced or even no alignment [1], [2] all fail these approaches significantly. The extreme difficulty on alignment is especially challenging since domain transformations cause it problematical to measure image similarity for classification and recognition. Although long-standing batch image alignment has been investigated over two decades and many algorithms have been proposed, achieving a high compelling aligned image is still elusive.

三、文体特点

➢ 如何使表达准确——正确选词

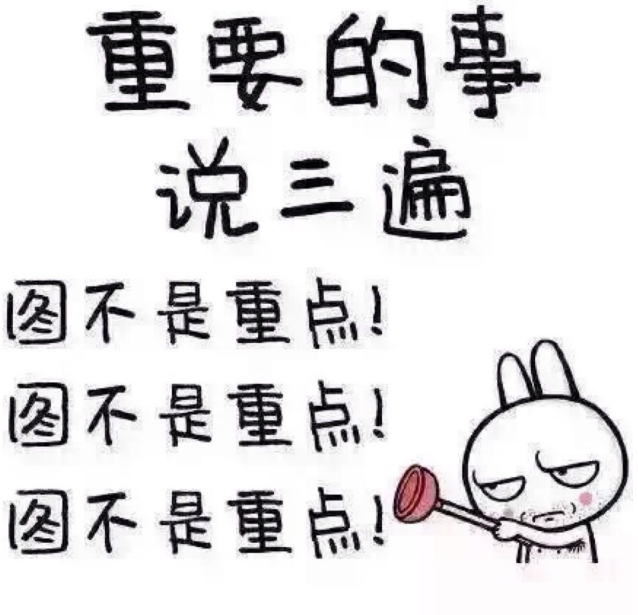
- The marines took with them full combat equipment including tanks, artillery, jeeps, and flamethrowers.
- This laboratory does not even have a heating installation.
- This model has separate instruments for oil pressure, water temperature, fuels gauge, and ammeter.

- equipment是不可数名词，意义上往往指有形的、看得见的硬件设备；
- installation也指设备、设施，但一般是指安装或装配上去的设备，不可以随时拿走或拆卸；
- instrument常指精密度较高的器械、仪器、仪表

三、文体特点

➢ 如何让语言简洁——避免赘词

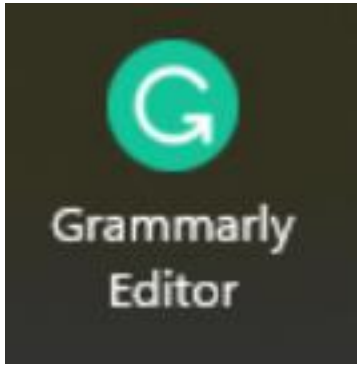
- The use of transgenic technology is becoming increasingly more widespread.



三、文体特点

➢ 如何让语言简洁——避免赘词

- The use of transgenic technology is becoming increasingly more widespread.
- The aluminum metal cathode became pitted during the glow discharge.



三、文体特点

➢ 如何让语言简洁——避免赘词

- (already) existing
- (alternative) choices
- at (the) present (time)
- (basic) fundamentals
- (completely) eliminate
- (continue to) remain
- (currently) being
- (currently) underway
- (empty) space
- had done (previously)
- Mix (together)
- Never (before)
- None (at all)
- Now (at this time)
- Period (of time)
- (separate) entities
- Start (out)
- (still) persists

三、文体特点

➢ 如何让语言简洁——避免赘词

- 删除无意义的词语和结构

as a matter of fact,

it should be point out that,

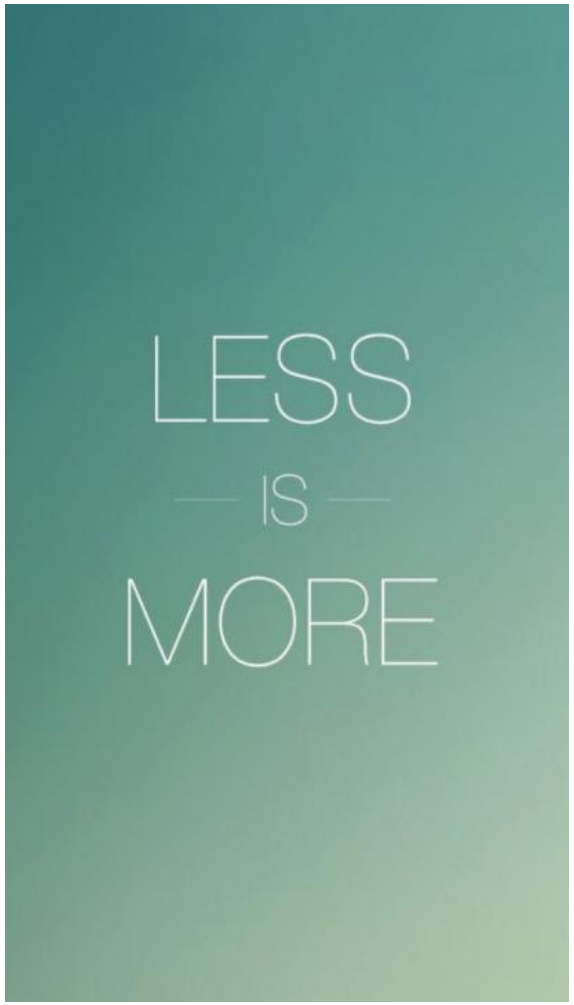
I might add that,

it is noteworthy that,

the fact that,

it is significant that,

the presence of



三、文体特点

➢ 如何让语言简洁——避免赘词

- 用短语替代从句：能用单词不用短语，能用短语不用从句。

If As are applied to B, the following sample can be obtained.

Application of A in B medium promotes the following sample.

- 过去分词短语替代从句

The signals which are not wanted

The unwanted signals

三、文体特点

➢ 如何让语言简洁——避免赘词

- 介词短语替代从句，使句子结构简单、精炼，具有从句的功能

If the temperature is higher than 60 C.

At temperature higher than 60 C.

- With + 复合结构 = 无动词从句

A brief introduction to the cell biology is given with emphasis on histology.

An analysis has been made with satisfactory results.

- 使用省略手段

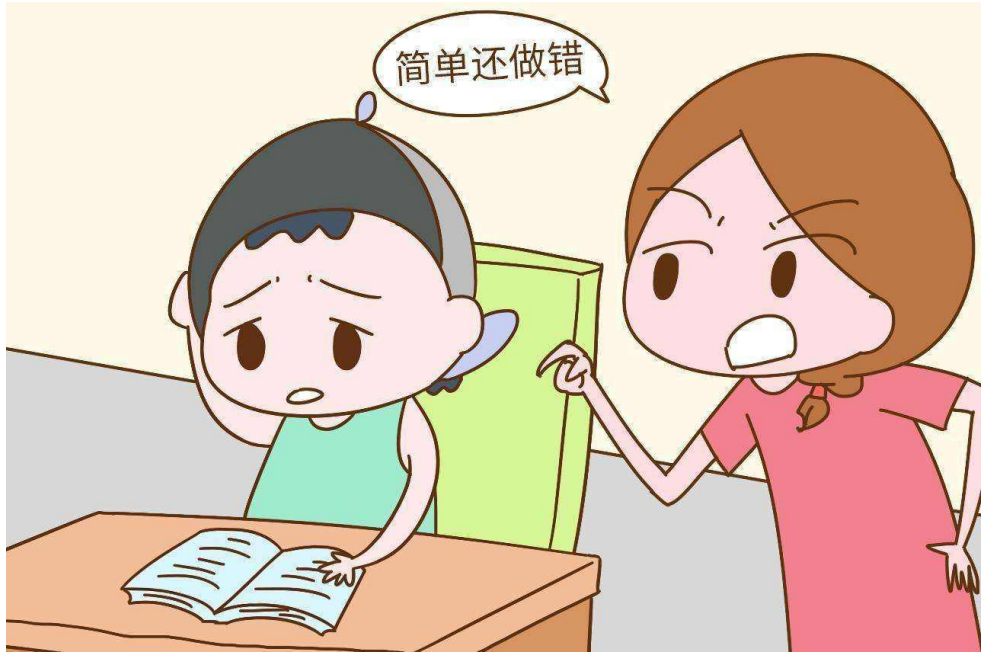
When (it is) powered, a substance may change its color.

Red is seen to have the longest wave, violet the shortest wave, and green intermediate between the two.

三、文体特点

➢ 原则

- Clarity——Be Clear
- Conciseness——Be Concise
- Objectivity——Be Objective
- Coherence——Be Coherent
- Correct——Be correct

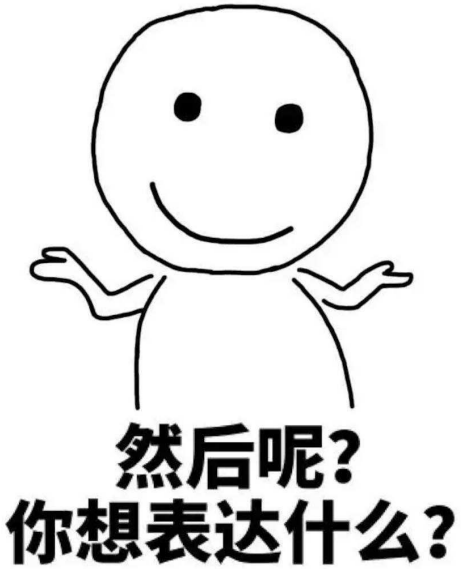


三、文体特点

- Keep in mind

The writer's aim should be to be understood at first reading. It is your responsibility to be clear – not your reader's to unscramble your muddled message.

- ---Elizabeth Murphy

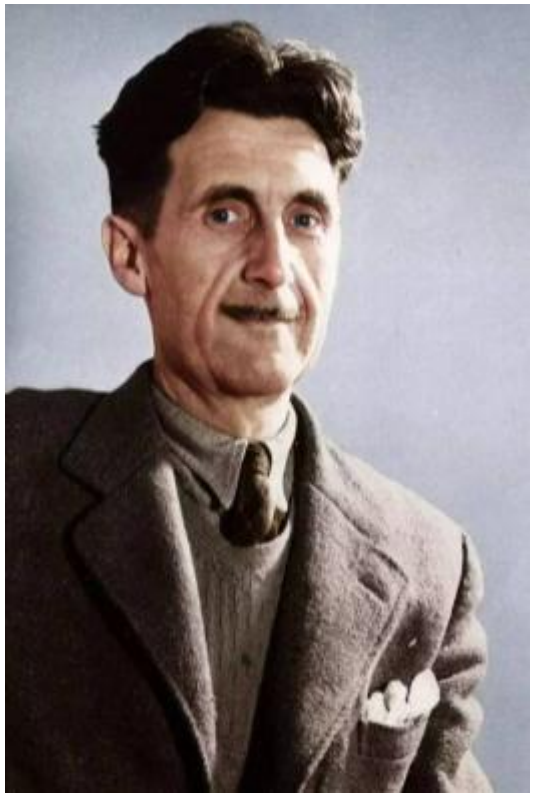


三、文体特点

- Keep in mind

Never use a long word where a short one will do.

--- George Orwell



Q & A