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## 第一章 Background 背景

1. **with the [adj.] development of [n.], scholars have proposed ..., especially ....**

随着... 的... 地发展, 学者们提出了..., 特别是在... 领域/方面。

**E.g.** With the fast development of automated vehicle (AV) technologies, scholars have proposed various innovative local traffic control schemes for more effective management of AV traffic, especially at intersections.

2. **... is one challenging problem in ...**

... 是.... 领域里一个有挑战的问题

**E.g.** Traffic signal control for a large-scale traffic network is one challenging problem in intelligent transportation systems (ITS).

### 不用管

没啥用, 但不引用一下这个模板会报错<sup>[?]</sup>。



## 第二章 Challenge 挑战

1. **However, due to [原因], [主题] is still at the initial stage.**

然而，由于... 的原因，... 依旧处于初级阶段。

**E.g.** However, due to computational intractability, the investigation of network-level AV control is still at the initial stage.

2. **[challenge] is typically required to achieve [goals] in [sceneries].**

一项 [挑战] 在 [场景] 中实现 [目标] 是需要的。

**E.g.** High communication overheads are typically required to achieve the optimal control of the traffic signals in multiple road intersections.



## 第三章 Method 方法

### 1. **force sb. to do sth. in [形式]**

强迫某人以某种形式做某事

**E.g.** We develop a platoon "strategy" that forces AVs to pass through conflict points in platoons.

### 2. **trade-off(v.) between A and B**

在 A 和 B 之间权衡

**E.g.** These two algorithms can trade-off between solution quality and computational load.

### 3. **In this paper, in order to [achieve goal], we propose to do [experiment process] by [some information].**

在本文中，为了...，我们提出通过... 完成...

**E.g.** In this paper, in order to avoid these communication overheads among spatially distributed intersections, we propose to recover the global traffic state at each intersection in a real-time fashion by only utilizing the traffic state observed at the local intersection.

### 4. **Specifically, [something unique] base on [some method] is presented to [achieve goal].**

特别的是，基于... 的... 被展现出来以...

**E.g.** Specifically, a generative adversarial network (GAN) based traffic information recovery method is presented for each intersection controller to recover the global traffic state.





## 第四章 Simulation 仿真实验

1. **Numerical tests show...**

2. **approach(v.) zero**

接近零

**E.g.** The average vehicle delay approaches zero when the traffic is relatively mild.

3. **Meanwhile**

同时，进一步阐述其他实验结论

4. **[strategy/approach] gives a balance between A and B.**

**E.g.** E.g. The platoon strategy can give a better balance between the optimality and real-time performance.

5. **Comprehensive numerical results demonstrate the effectiveness of [the scheme] in [doing sth]**

综合的数值结果表明了... 在完成... 时的有效性。

**E.g.** Comprehensive numerical results demonstrate the effectiveness of the proposed scheme in recovering the global traffic state.



## 第五章 Phrases 短语

短语	含义
交通	
maintain the non-collision insurances	保持非碰撞保险
handle heavy traffic	处理拥挤的交通
under congested scenario	在拥挤的场景
通信	
high communication overheads	高通信开销
计算	
relieve the computational load	释放计算负载
real-time fashion	实时的方式

