MPC and ADRC:Study, Inspiration and Combination

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Development of MPC

MPC 的状态空间表达是最优控制理论继续发展的产物，是在线性二次型调节器 (LQR) 基础之上的拓展。MPC 相比于传统线性二次型调节器的优势在于，MPC 能够解决输入、状态包含约束的限制条件。通过实时求解二次型优化问题，滚动时域来确定一系列控制律，从而使得系统一直处于最优决策的状态下。

无限时域离散 LQR	有限时域离散 LQR	基于状态空间的 MPC

Table: MPC 的演化过程

Contents

Blocks

The blocks are shown below

Regular Block

Content of a regular block

Example Block

Content of an example block

Alert block

Content of an alert block

Contents

Enumerate & Overlays

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An Example of `enumerate`

1. First item
2. Second item
3. Third item

An Example of `itemize`

- First item
- Second item
- Third item

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Two columns

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Content for column one

$$E = mc^2 \tag{1}$$

Content for column two

$$F = ma \tag{2}$$

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Figures

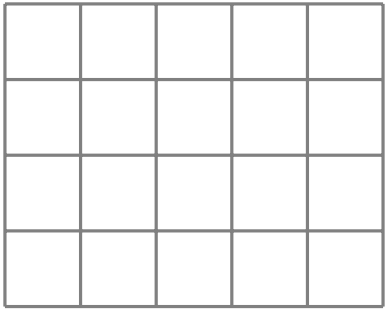

Figure: Credits to Ti*k*Z

A Listings Demo

C++

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```
int main() {
// Define variables at the beginning
// of the block, as in C:
CStash intStash, stringStash;
int i;
char* cp;
ifstream in;
string line;
[...]
```

Thank you for your attention!
Questions?