Graduation Project (ME4918)
Weekly Report(X)

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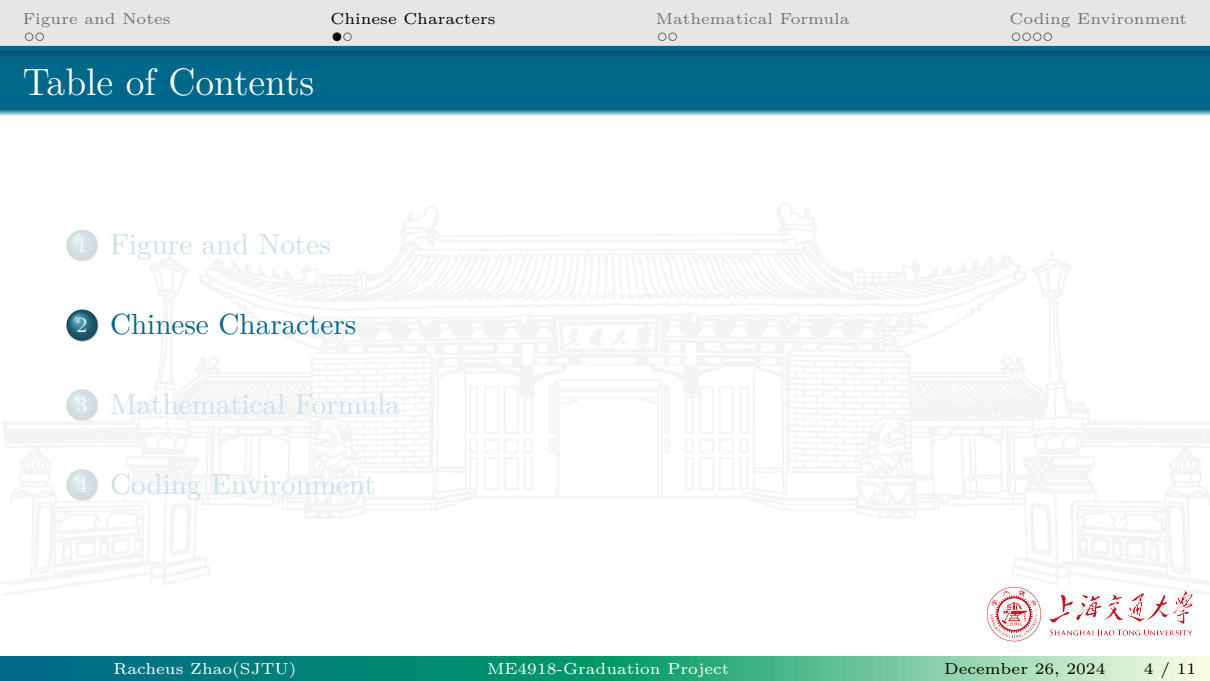December 26, 2024

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Figure and Notes

In Simulink, you can import models from other modeling environments, such as Solidworks.

Save the modeling file in XML format or URDF format, set a reasonable rotation coordinate system, and import it into Simulink for simulation.

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中文测试

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- 邓紫棋：《倒数》，《多远都要在一起》
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Mathematical Formula

Mathematical Formula

$$\dot{x} = Ax + Bu$$
$$y = Cx + Du$$

$$(1)$$

对于机械臂的拉格朗日动力学方程，可以写成如下形式：

$$\frac{d}{dt}(\frac{\partial L}{\partial \dot{q}_i}) - \frac{\partial L}{\partial q_i} = Q_i \tag{2}$$

Where Lagrangian L is defined as:

$$L = T - V \tag{3}$$

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Coding Environment

import numpy as np

```
{
    const double h1 = (-vd + aMax*tf);

    profile.t[0] = -vd*vd/(2*aMax*h1) + (pd - v0*tf)/h1;
    profile.t[1] = -vd/aMax + tf;
    profile.t[2] = 0;
    profile.t[3] = 0;
    profile.t[4] = 0;
    profile.t[5] = 0;
    profile.t[6] = tf - (profile.t[0] + profile.t[1]);

    if (profile.check_for_second_order_with_timing<ControlSigns::UDDU, ReachedLimits::ACC0>(tf, aMax,
    aMin, vMax, vMin)) {
        profile.pf = profile.p.back();
        return true;
    }
}
```

CodeSnap + Figure 清晰度不太高

lstlisting Environment

Here is a sample C++ code snippet:

Listing 1: Sample C++ Code

```cpp
#include <iostream>

int main() {
    std::cout << "Hello, Beamer!" << std::endl;
    return 0; //test
}
```

Thanks for listening!