

Team Hanada Lab

The 10th Spacecraft Control System Design Contest

Department of Aeronautics and Astronautics, Kyushu University

Isobe Shun Tanahasi Mahiro

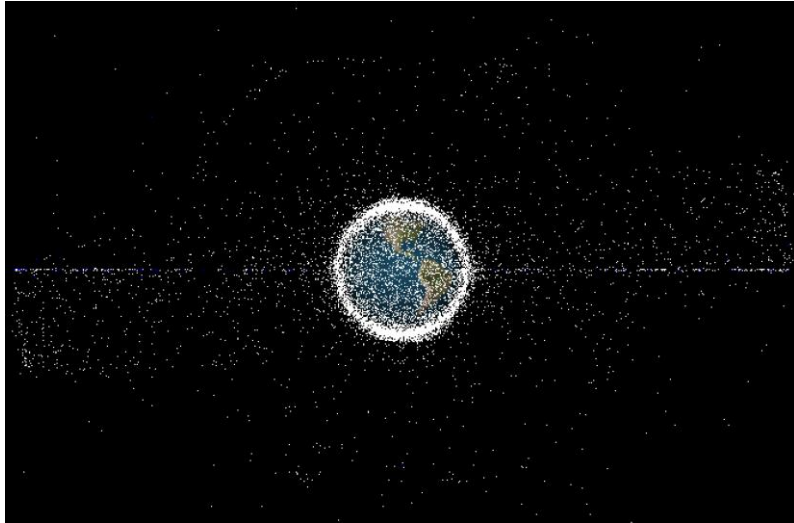
Nakajima Kenta Takahasi Kazunobu



九州大学

1. Self-introduction

Hanada Laboratory



Space System Dynamics Lab.

1. Small Satellite Design
2. Space Debris Modeling
3. Space Situational Awareness

Member

Department of Aeronautics and Astronautics, Kyushu University

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Nakajima Kenta Takahasi Kazunobu



2. Features of the program

Control law

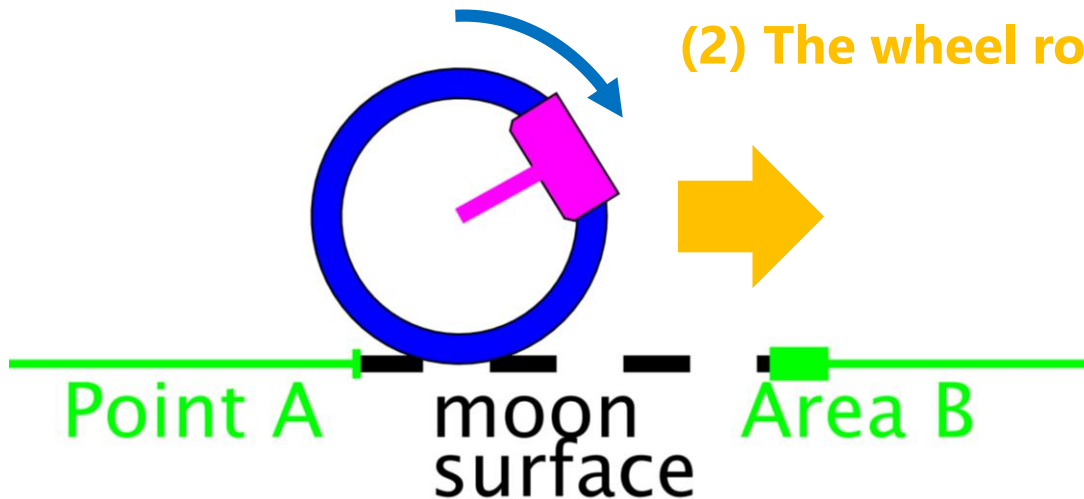
- ✓ PID control
- ✓ Input-output Linearization
- ✓ Feedback Linearization Technique
- ✓ Gain Scheduling

Simple mechanism
Robust stability

Dynamics

(1) Incline the saddle

(2) The wheel rotate



**We focused only on
angle α
& controlled by PID**

2. Features of the program

Change Point

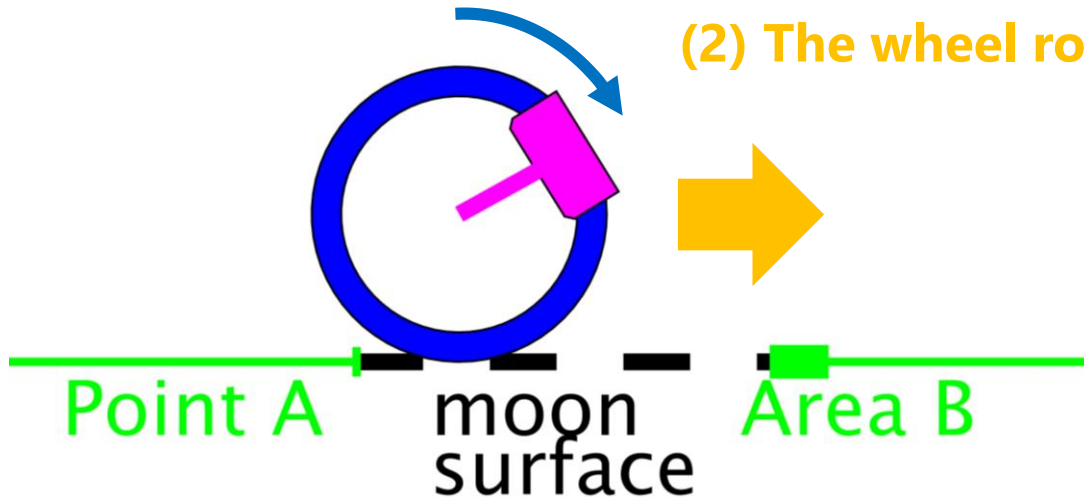
- ✓ Nothing

**Simple mechanism
Robust stability**

Dynamics

(1) Incline the saddle

(2) The wheel rotate



**We focused only on
angle alpha
& controlled by PID**