



# SUDA LAB.

Driving simulator visit  
Poster exhibition

## [Dynamics and Control of Vehicle]

Institute of Industrial Science    Advanced Mobility Research Center (ITS center)  
Department of Mechanical and Biofunctional Systems  
Mobility and Field Science

<http://www.nozomi.iis.u-tokyo.ac.jp/>

Specialized Field ● Dynamic Systems and Control

1. Study on control of human-vehicle-infrastructure system on advanced vehicle
2. Study on sustainable transport systems
3. Study on improvement of safety, ecological ability and comfort on transportation system

**Advanced control, multi-body dynamics and environmental physiology are applied to achieve sustainable mobility.**

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|---|---|
| ① Dynamic analysis of railway vehicle/ automobile/ bicycle by using multibody dynamics          | ⑦ Self powered active vibration control is applied to ship and vehicle  |
| ② Development of Self-steering Truck and Power-Steering Bogie with Independently Rotating Wheel | ⑧ Study on abnormal detection in human/ vehicle/ infrastructure systems |
| ③ Development of electromagnetic damper for automobile  | ⑨ Study on personal mobility vehicle                                    |
| ④ Study on driving simulator and driver characteristics   | ⑩ Study on onboard flywheel system                                      |
| ⑤ Study on Intelligent Transportation Systems (ITS)   | ⑪ Energy-saving transportation system                                   |
| ⑥ Contact mechanics between wheel/rail and tire/road  | ⑫ Evaluation of comfort   |

**Multibody Dynamics and Control**

**Ship Anti-Rolling System with Self-Powered Active Control**

**Maglev System with Controlled Damper**

**Eco transport system "Eco Ride"**

**Full and Scaled Model Rail Vehicle Test Track for Innovative Designed Railway Truck**

**Full Scale Mockup Rail Vehicle for Study on Comfort**

**Experimental Traffic Light for ITS Research**

**Tire Test Machine**

**Driving Simulator with 6 d.o.f motion, Turntable & 360° Full Screen**

**Electro Magnetic Suspension for Automobile**

**Personal Mobility Vehicle**

**Automobile & ITS**

**Comfort and Human Interface**

**Railway Vehicle**

**SUDA Lab.**