



K. Nakano Lab.

[Measurement and Control in Mobility]

Advanced Mobility Research Center

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

Mechanical and Biological Systems Control

Interdisciplinary Information Studies, Mechanical Engineering

Human-oriented Mobility Engineering

Based on knowledge of mechanical engineering, we are carrying out studies on active vibration control, energy harvesting, multi-channel signal processing method such as independent component analysis applied for condition monitoring, measurement of bio-signals, haptic guidance control, human-machine interface in automobiles, ability of elderly drivers, and so on. Studies on measurement and control mainly related to automobiles are widely being conducted.

Mobility engineering using bio-signals

Evaluation on safety of a car navigation display with gaze measurement.

Haptic guidance control

Automatic platooning of trucks

◆ Development of ITS to railway vehicles

Evaluation of driving ability of elderly drivers with white matter lesions

Independent component analysis applied to measurement of vehicle vibration

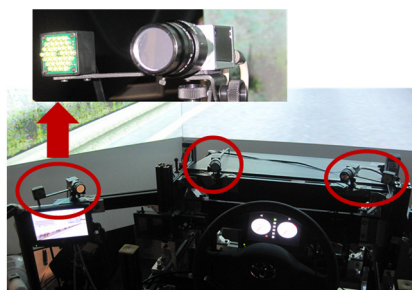
◆ Personal mobility vehicles

Energy harvesting using stochastic resonance

Electromagnetic suspensions



DS experiment



Gaze measurement system



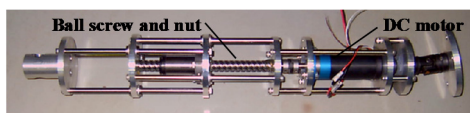
Vibration analysis
on a railway bogie using ICA



Test of driving ability of
elderly drivers



Truck DS



Electromagnetic actuator for an automobile
suspension