K. Nakano Lab.

[Measurement and Control in Mobility]

Advanced Mobility Research Center

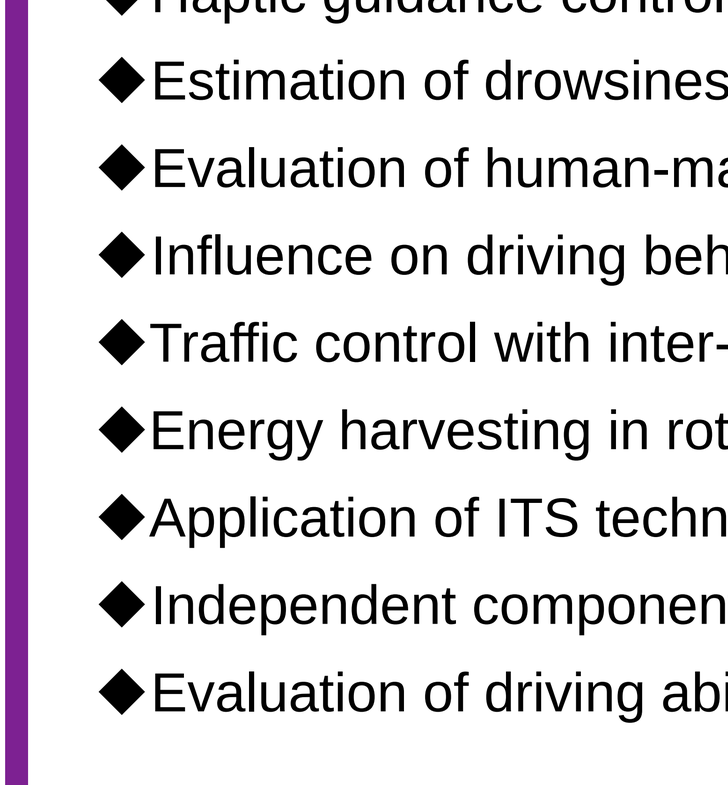
http://www.knakanolab.iis.u-tokyo.ac.jp/english/index_en.htm

Interdisciplinary Information Studies, Mechanical Engineering

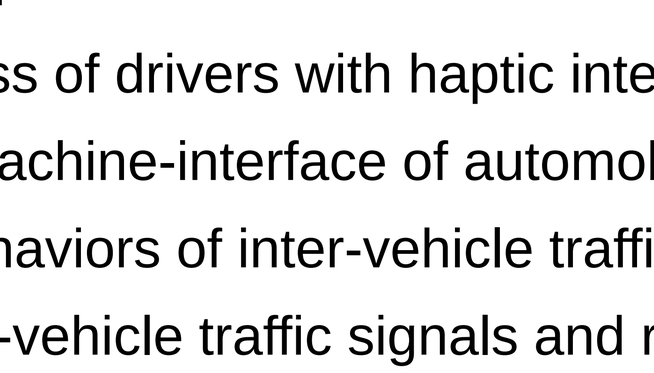
Human-oriented Mobility Engineering

Based on knowledge of dynamics, measurement, and control, we are carrying out the studies related to human-oriented mobility engineering. The followings are topics of the researches.

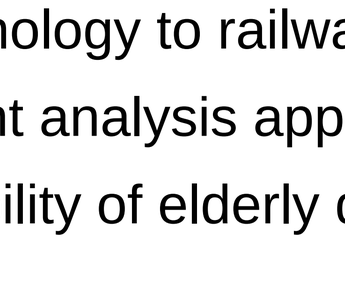
- ◆Mobility engineering using bio-signals
- ◆Haptic guidance control
- ◆Estimation of drowsiness of drivers with haptic interface
- ◆Evaluation of human-machine-interface of automobiles with gaze measurement
- ◆Influence on driving behaviors of inter-vehicle traffic signal
- ◆Traffic control with inter-vehicle traffic signals and road signs
- ◆Energy harvesting in rotating tires using stochastic resonance
- ◆Application of ITS technology to railway vehicles
- ◆Independent component analysis applied to measurement of vehicle vibration
- ◆Evaluation of driving ability of elderly drivers with white matter lesions

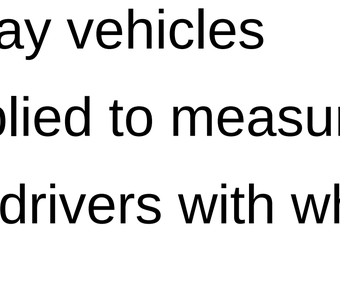


Driving simulator

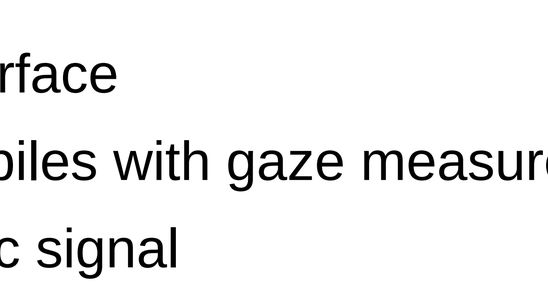


Gaze measurement system

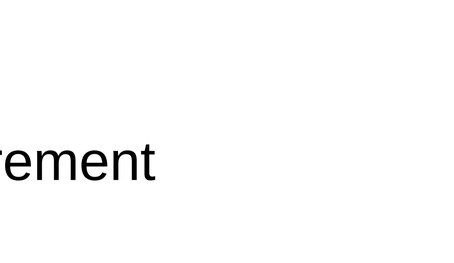




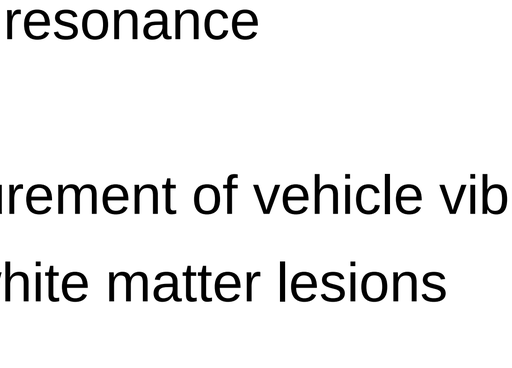
Evaluation of inter-vehicle displays



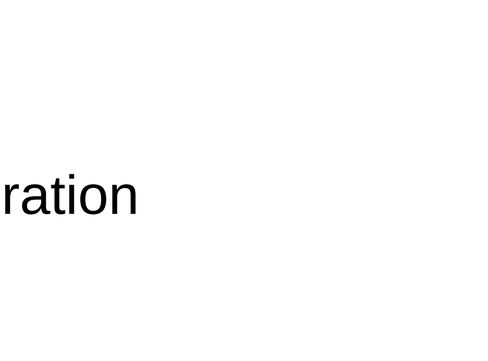
Vibration analysis on a railway bogie



Railway electric cart



Experimental traffic signal and test electric vehicles



Energy harvester installed in the tire