Vehicle Dynamic Control Strategy of Automated Driving
Advanced Mobility Research Center (ITS Center)

Mechano-Informatic Mobility Engineering

http://www.its.iis.u-tokyo.ac.jp/onoshin/

- Basic Technology for Automated Driving -- Toward wider ODD --
  - Hand signal recognition
  - Detecting road safety mirror
  - Event detection inside mirror
  - Vehicle recognition at night
  - Data augmentation for night images using image style transfer

- Video-based Driving Simulator
  - Enhancing reality using real video for background

- System for Information Collection, Integration, Visualization, and Distribution
  - Reducing CO₂ Emission by Raising Awareness of Citizens.
    Social experiment in Kashiwa City proved the possibility of 8% reduction by the Regional Transport Information System for promoting eco-friendly travel behavior.

- Detecting Unusual Events
  - Flood detection for driving video
  - Data augmentation using CG and GAN

- Detecting Unusual Events
  - Separating foreground/background by spacetime filtering

- Sensing by Specialized Vehicle
  - 3D Modeling of Road Structure

- Sensing by General Vehicles
  - Street Panorama before East Japan Earthquake Reconstructed from Driving Video Recorder

- Video-based Driving Simulator
  - Model (3D based)
  - Enhancing reality using real video for background

- System for Information Collection, Integration, Visualization, and Distribution
  - Distribution
  - Integration
  - Visualization
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  - Super Resolution (Refinement) of Super Wide-Angle On-Vehicle Camera

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