California PATH has been at the forefront of the research on Intelligent Transportation Systems (ITS). Tsinghua University is also leading research on ITS in various areas in China. In conjunction of the academic and cultural exchange hosted by UC Berkeley for Tsinghua University, PATH researchers and Tsinghua University delegates will conduct a two-day workshop on Intelligent Transportation Systems. The workshop will be conducted on campus on April 6, 2010 and at UC Berkeley Richmond Station on April 7th. Through the workshop, a number of critical and enabling areas will be discussed, including Advanced vehicle control, driver assist, transportation safety, transportation planning, data and analysis, and Intellidrive – Vehicle Infrastructure Integration. Potential collaborative opportunities will be explored through this exchange. The workshop is free and open to the public. RSVP is required for the April 7th event (through emails to Elaine Banks elaine@path.berkeley.edu).

April 6, 2010
3:15pm-5:15pm

Day 1

630 Sutardja Dai Hall Facilities (Citris Building)

3:15pm Advanced vehicle Control and Driver Assist Technologies

Moderator: Wei-Bin Zhang, Keqiang Li

Keqiang Li, Department of Automotive Engineering (Tsinghua University), “Overview of Tsinghua Work Related to Advanced Vehicle Control and Driver Assist Technologies”

Jianqiang WANG, Department of Automotive Engineering (Tsinghua University), “Chinese Driver Behavior Analysis and Modeling”

Masayoshi Tomizuka, Department of Mechanical Engineering (UC Berkeley), “Adaptive Cruise Control Using Virtual Lead Vehicles”

Steven Shladover, California PATH Program (UC Berkeley), “Cooperative Adaptive Cruise Control – Human Factors Experiments”

Li LI, Department of Automation (Tsinghua), “Car Following Models Considering Headway Feature”

Hanshue TAN, California PATH Program (UC Berkeley), “Dynamic modeling of driving skills – from vehicle control perspectives”

Fanping BU, California PATH Program (UC Berkeley), “Driver Assist”
April 7, 2010
Day 2

Building 454 Conference Room
Richmond Field Station
University of California at Berkeley

9:00 am  Overview

Introduction
Masayoshi Tomizuka, Executive Associate Dean, College of Engineering, UC Berkeley
PATH Overview
Alex Skabardonis, Director, California PATH, UC Berkeley
Overview of PATH Research on Vehicle Infrastructure Integration
James Misener and Wei-Bin ZHANG, California, UC Berkeley
Transportation Research at Tsinghua Overview
Huapu LU, Department of Civil Engineering, Tsinghua University
Keqiang LI, Department of Automobile Engineering, Tsinghua University
Yi ZHANG, Department of Automation, Tsinghua University
Overview of Institute of Transportation Studies
Samer Madanat, Director, Institute of Transportation Studies, UC Berkeley
Driver Assist
JiHua "Jill" Huang, Assistant Research Engineer, California PATH, UC Berkeley

10:00 am  Traffic Safety and Driver Assistance
Moderator: Ching-Yao CHAN, Zuo ZHANG

The Hierarchy Control System of Intelligent Hybrid Electric Vehicle
Yugong LUO, Department of Automobile Engineering, Tsinghua University
Engine Control for Environmental Friendly Driving
Karl Hedrick, Department of Mechanical Engineering, UC Berkeley
Evaluation for Traffic Situation and Emergent Traffic Pathway Organization In Responsive to Urban Severe Emergencies
Zuo ZHANG, Department of Automation, Tsinghua University
PATH Safety Research Program
Ching-Yao CHAN, California PATH Program, UC Berkeley
Discussion on Future Research and Potential Collaboration
Panelist: Keqiang LI, Yugong LU, Jianqiang WANG, Zhiheng LI, Masayoshi Tomizuka, Steve Shladover, Hanshue TAN, Xiaoyun LU

11:30 am  Visit PATH facility and demonstration

- SafeTrip (Jim Misener, Liping ZHANG, etc.)
- VAA (Hanshue TAN, Jill HUANG and Fanping BU)
- Truck and Shop tour (Xiaoyun LU, etc)
- CICAS and Intelligent Intersection (Steve Shladover, etc.)
- Traffic lab
12:30 noon    Lunch

1:00 pm    Transportation Planning, Data and Analysis
            Moderator: Huapu LU, Alex Skabardonis

            Tools for Operational Planning (TOPL)
            Roberto Horowitz, Department of Mechanical Engineering, UC Berkeley

            Mobile Millennium – Cellphone Probes for Traffic Detection
            Alex Bayen, Department of Civil Engineering and Environmental Engineering, UC Berkeley

            Development and Prospect of Transportation Planning and Management in Chinese Cities
            Huapu LU, Professor, Department of Civil Engineering, Tsinghua University

            The Strategic Highway Research Program of Western China
            Runhua GUO, Department of Civil Engineering, Tsinghua University

            Discussion on Future Research and Potential Collaboration
            Panelists: Runhua GUO, Zuo ZHANG, Li Li, Alex Bayen, Alex Skabardonis, Jingquan Li, Irene Li

2:30 pm    Traffic Data Fusion and Vehicle Infrastructure Integration
            Moderator: James Misener, Lin ZHANG

            IntelliDrive – Vehicle Infrastructure Integration for Transportation Innovations
            James Misener, California PATH Program, UC Berkeley

            Traffic Signal Adaptation for Intersection Safety
            Liping ZHANG, California PATH, UC Berkeley

            Networked Traffic Flow Feature Extraction Method and Application
            Jianming HU, Department of Automation, Tsinghua University

            Optimizing Content Dissemination in Heterogeneous Vehicular Networks
            Lin Zhang, Department of Electronics Engineering, Tsinghua University

            Discussion on Future Research and Potential Collaboration
            Panelists: Jianming HU, Lin ZHANG, Danya YAO, Yi ZHANG, Alex Bayen, Liping ZHANG, Kun ZHOU, Susan Dickey

4:00pm    Adjourn