Timetable

September 22, Monday

	Main Lecture Room (L0026)
9:00	*Opening Session*
9:30	*Plenary Session I* **Vehicle Dynamics Control - What should be controlled and what should be the index?** Dr. Yasuji Shibahata
10:30	

	Room A (L0011)	Room B (L0012)	Room C (L0013)	Room D (L0021)
	MoA1: Vehicle Dynamics I - Analysis and simulation Chair: Kageyama (Nihon University)	**MoB1: Collision Avoidance I- Control** Chair: Hattori (Toyota CRDL)	**MoC1: Driver Behavior** Chair: Fuchs (JTEKT R&D Center in Europe)	**MoD1: Hybrid EV Control** Chair: Peng (University of Michigan)
10:40	*MoA1-1* **Geometric-Nonlinear Response Analysis of Moving Vehicle under Flexible Road** Wang, Lin, Huang	*MoB1-1* **Performance of Emergency Steer Assist in Front Wheel and Rear Wheel Steering Vehicle** Shah, Zegelaar, Best	*MoC1-1* **Trajectory Analysis by Haptic Steering Accompanying Audio Navigation** Takahashi, Nakano, Zheng, et al.	*MoD1-1* **Smart and Green Autonomous Vehicle Controller: Enhancement of Regeneration and Powertrain Strategy** AKHEGAONKAR, NOUVELIERE, GLASER, et al.
11:05	*MoA1-2* **Analysis Method of Ride Comfort under Actual Road Input** Yoshimi, Koumura, Shionoya	*MoB1-2* **Application of An Optimal Vehicle Path Controller on Curved Roads after Collisions** Yang, Gordon, Jonasson, et al.	*MoC1-2* **An Experimental Analysis of Driver's Steering Operation Affected with Vehicle Side Slip Angle** Kazama, Suzuki, Haramiishi, et al.	*MoD1-2* **An Investigation into Power Management Control for Improved Fuel Economy of Series Hybrid Electric Vehicles** Yun, Lee, Yi
11:30	*MoA1-3* **A Versatile Simulator for Vehicle Dynamics Quantification** Maroonian, Okada, Sawada, et al.	*MoB1-3* **Torque Vectoring for Collision Avoidance of Automated Driving Vehicle using Robust Model Predictive Control** Seo, Choi, Yi	*MoC1-3* **Relationship between Gripping Force and Mechanical Arm Admittance of a Driver under Perturbations** Joly, Nakano, Zheng	*MoD1-3* **Study of Specification Matching Algorithm for Hybrid Power Systems** Cheng, Wang, Lu
11:55	*MoA1-4* **Control for the Linearization of Electric Power Steering** Wilhelm, Tamura, Müllhaupt, et al.	*MoB1-4* **Optimizing the Braking Control System Performance during Turning Maneuver** Mirzaeinejad, Mirzaei	*MoC1-4* **Analysis of the Effect of Body Dynamic Characteristics on Steering Feel** Nakajima, Hattori, Akamatsu	*MoD1-4* **A Control System Development for a Series Hydraulic Hybrid Propulsion System with MPC Application** Chen, Vu, Hung, et al.
12:20				

	MoA2: Vehicle Dynamics II - Steering Dynamics Chair: Pfeffer (Munich University of Applied Sciences)	MoB2: Collision Avoidance II - Risk Assessment Chair: Ploechl (Vienna University of Technology)	MoC2: Driver Modeling and Testing Chair: Furukawa (Shibaura Institute of Technology)	MoD2: Modeling and Estimation Chair: Shino (The University of Tokyo)
13:20	*MoA2-1* **Assisted Human Powered Vehicle with Innovative Steering System** Tan, Zheng, Sugimachi, et al.	*MoB2-1* **Predictive Pedestrian Collision Avoidance with Driving Intelligence Model Based on Risk Potential Estimation** Matsumi, Raksincharoensak, Nagai	*MoC2-1* **Identification and Validation of a Driver Model Including Neuromuscular System Dynamics** Wang, Cole	*MoD2-1* **Nonlinear Modeling and Parameter Identification of Vehicle's Lateral Dynamics** Wielitzka, Dagen, Ortmaier
13:45	*MoA2-2* **Innovative Vehicle Dynamics Functionality of the Wheel-Individually Steerable Front Axle of the Research Vehicle SpeedE** Eckstein, Schwarz, Hesse	*MoB2-2* **The Potential Safety Benefit of Propulsion in Obstacle Avoidance Manoeuvres with Oncoming Traffic** Arikere, Klomp, Lidberg, et al.	*MoC2-2* **Developing of a Driver Model for Vehicle Testing** Jansson, Olsson, Linder, et al.	*MoD2-2* **Yaw Moment Observer Design for Electric Vehicles Considering Vehicle Speed Variation** Wang, Fujimoto
14:10	*MoA2-3* **Study on shimmy phenomenon for light duty trucks** Hirano, Kuriyagawa, Kageyama, et al.	*MoB2-3* **Risk-Potential Based Motion Planning and Control of Proactive Driving Intelligence System for Enhancing Active Safety** Hasegawa, Raksincharoensak, Nagai	*MoC2-3* **Development of a method of analyzing driver operational factors and its application** Sagane, Yoshikawa, Nidaira, et al.	*MoD2-3* **Real-Time Simulation of Detailed Vehicle Models using Multiple Cores** Andreasson, Elmqvist, Griffin, et al.
14:35	*MoA2-4* **The Wheel Turn Center Method for Analyzing Multi-axle Vehicle Steering Coordination Performance** Xin, Pingping, Bo, et al.	*MoB2-4* **A Probabilistic Study of Rear-end Collision Risk Using Virtual Configuration Space** Kim, Huh	*MoC2-4* **Integrated Longitudinal and Lateral Control Model of Human Driver Using Nonlinear Model Predictive Control** Chen, Shih	*MoD2-4* **Estimation of Yaw Moment of Inertia of a Truck during Travelling Using Dual Kalman Filter** Lee, Nakano, Ohori
15:00				

	MoA3: Vehicle Dynamics III - Lateral Control Chair: Edelmann (Vienna University of Technology)	MoB3: Collision Avoidance III - Digital Map and Driver-Interaction Chair: Yi (Seoul National University)	MoC3: Driver Steering Control Chair: Lefevre (UC Berkeley)	MoD3: Advanced Powertrain Chair: Schick (AVL)
15:20	*MoA3-1* **Vehicle Dynamics from the View of Rigid Body Rotation and Gravity Center Turning** Takehara, Yamamoto	*MoB3-1* **A Collision Avoidance System using GNSS and Digital Map Data** Christen, Eckstein, Duysinx	*MoC3-1* **Development of Automatic Steering Control System Based on Optical Flow Model** Inou, Fukao, Totsuka, et al.	*MoD3-1* **Self-Optimizing Fuzzy PID Controller for Speed Control of Electric Vehicles** Lin, Tai, Chang
15:45	*MoA3-2* **Testing Vehicle Performance on Snow Using Sine with Dwell** Kharrazi, Hjort, Bruzelius, et al.	*MoB3-2* **Acceptability of Proactive Collision Avoidance for Elderly Drivers** Shino, Ito, Kamata	*MoC3-2* **Modelling of a Driver's Interaction with Vehicle Active Steering in a Collision Avoidance Scenario** Na, Cole	*MoD3-2* **Fuel Saving Potential of Optimal Engine Cooling System** Khodabakhshian, Feng, Wikander
16:10	*MoA3-3* **Design for Vehicle Stability under Force Control** Sakai	*MoB3-3* **Study on Shared Driving Characteristics between Driver and Collision Avoidance Steering Control Using Driving Simulator** Iwano, Raksincharoensak, Nagai	*MoC3-3* **Proposal of New Steering System without a Changing of Steering Grip Position during Low Speed Driving** Kitahara, Mouri, Haramiishi	*MoD3-3* **Euler-Lagrange Dynamics and Passivity Control of Thermoelectric Air Cooling/Heating Systems for Electric Vehicles** Miranda, Hsu, Hong
16:35	*MoA3-4* **Optimal Steering for Double-Lane Change Entry Speed Maximization** Katzourakis, Lidberg, Angelis, et al.	*MoB3-4* **Control Strategy of Emergency Steering Return Based on Driver's Intention** Jun, Lu, Yuan, et al.	*MoC3-4* **Effects of Pushing Steering Wheel and Shoulder Support on Mechanical Characteristics of Seat-Driver-Steering System** Yamaguchi, Yamada, Hada	
17:00				

17:30-17:45 **AVEC'14 Photo Session @ the front of Ellipse**
17:45-20:00 **Welcome Reception @ Ellipse 3 F Hall**

September 23, Tuesday

Main Lecture Room (L0026)

9:00 *Plenary Session II*
A Large-scale Field Test of Connected and Automated Vehicles--Lessons Learned and Future Outlook
Prof. Huei Peng / Dr. Peter Sweatman

9:40

10:10 *Special Interest Session*
"Automated and Connected Driving"
Masao Fukushima, MItsuhisa Shida, Dr.-Ing. Adrian Zlocki, Dr.-Ing. Roman Henze

11:40

	Room A (L0011)	Room B (L0012)	Room C (L0013)	Room D (L0021)
	TuA1: Tire Modeling and Estimation Chair: Abe (Kanagawa Institute of Technology)	**TuB1: Direct Yaw-Moment Control** Chair: Chen (National Taipei University)	**TuC1: Driver Behavior II** Chair: Cole (University of Cambridge)	**TuD1: Vehicle Road Estimation** Chair: Lee (Korea Polytechnic University)
12:40	*TuA1-1* **Effect of cornering forces measurement on real-time estimation of tyre-road friction coefficient, vehicle sideslip angle and road bank angle** Cheli, Ivone, Sabbioni	*TuB1-1* **Direct Yaw Moment Control and Power Consumption of In-Wheel Motor Vehicle** Kobayashi, Katsuyama, Sugiura, et al.	*TuC1-1* **Elderly Drivers' Behavior Analysis at Non Signalized Intersections without Right of Way** Sato, Takenaka, Nagai	*TuD1-1* **Road Image Generation with Probe Vehicle Data Using Low-Cost Sensors for ADAS** Meguro, Ishida, Guo, et al.
13:05	*TuA1-2* **Tire Force Estimation Utilizing Wheel Torque Measurements and Validation in Simulations and Experiments** Albinsson, Bruzelius, Jonasson, et al.	*TuB1-2* **Driving Stability during Recuperation for Increased Rear Axle Loads with and without Torque Vectoring** Kaspar, Stroph, Pruckner, et al.	*TuC1-2* **Driver State Detection Method Based on Naturalistic Driving Behavior during Approach to Intersection with ADAS** Shino, Minami, Hiramatsu, et al.	*TuD1-2* **Road Geometry Estimation for Vehicle-to-vehicle Based Connected Safety Systems** Kim, Park, Lee, et al.
13:30	*TuA1-3* **Assessment of Brush Model Based Friction Estimator Using Lateral Vehicle Dynamics** Xiong, Zhuang, Tuononen	*TuB1-3* **Comparison of Deceleration Control and Yaw-moment Control Applied in the Early Stage of Cornering** Yamakado, Nagatsuka, Takahashi	*TuC1-3* **Driver's Deviation Degree for Acquiring the Sign of Unsafe Driving Behavior at Intersections** Utsumi, Shino, Kamata, et al.	*TuD1-3* **Estimation of Vehicle Attitude using State Observer Integrating Inertial Sensors and GPS** Hirano, Amano, Hattori, et al.
13:55	*TuA1-4* **Vehicle-Model-Based Lateral Tire Force Estimation for 4WID EV** Chen, Bian, Luo, et al.	*TuB1-4* **Yaw Moment Control Using Fuzzy Reinforcement Learning** Akbari, Goharimanesh	*TuC1-4* **Analysis of Mandatory and Discretionary Lane Change Behaviors for Heavy Trucks** Zhao, Peng, Nobukawa, et al.	*TuD1-4* **Precise Positioning for Inductive Charging of Electric Vehicles by means of RFID Techniques** Christen, Klaudt, Geulen, et al.
14:20				
	TuA2: Special Vehicles Chair: Nagai (Japan Automobile Research Institute)	**TuB2: Tire Force-Based Chassis Control** Chair: Takahashi (Toyota Motor Europe)	**TuC2: Collision Avoidance System IV - Design and Evaluation** Chair: Li (Tsinghua University)	**TuD2: Energy Management** Chair: Lin (National Taiwan University)
14:40	*TuA2-1* **Real-Time Optimal Feedback Control of UGVs Using Modified Carathéodory- π Solutions** Watanabe, Harada	*TuB2-1* **Comparison of Optimization Schemes for Tire Force Distribution in Integrated Chassis Control** Nishihara	*TuC2-1* **Evaluation of Forward-Vehicle Collision-Avoidance Systems - How Drivers Respond to Warnings of Unexpected Hazardous Situations -** Homma, Kikuchi, Wakasugi, et al.	*TuD2-1* **Study of a Dynamic Charge System** Tajima, Noguchi, Aruga, et al.
15:05	*TuA2-2* **Driver-Hardware/Software-in-the-Loop Real-Time Simulations for the Design of Active Trailer Steering Systems of Multi-Trailer Articulated Heavy Vehicles** He, Wang	*TuB2-2* **Roll Control Using Tire Longitudinal Forces Integrated with Tire Force Distribution of Full Drive-by-Wire Electric Vehicle** Suzuki, Kano, Abe, et al.	*TuC2-2* **Collision Avoidance Driver Assistance System Using Combined Active Braking and Steering** Gurov, Sengupta, Jonasson, et al.	*TuD2-2* **Energy Management for Hybrid Electric Vehicles Considering Battery State-of-Function** Shen, Wang, Ma
15:30	*TuA2-3* **Model-Based Stabilization of Articulated Heavy Vehicles under Simultaneous Braking and Steering** Morrison, Cebon	*TuB2-3* **Motor/Hydraulic Systems Combined Stability Control Strategy for Distributed Electric Drive Vehicle** Leng, Xiong, Yu, et al.	*TuC2-3* **Hazard-Anticipatory Collision Avoidance System Based on Two-Dimensional Pedestrian Motion Prediction** Ezawa, Raksincharoensak, Nagai	*TuD2-3* **Range extended engine management system for electric vehicles: Control design process** Paluszczyszyn, Al-Doori, Manning, et al.
15:55	*TuA2-4* **Motorcycle Steering Control Using Controlled Variable with Linear Combination of Rolling Angle and Yaw Rate** Marumo, Mouri	*TuB2-4* **A Moderated Particle Reference Strategy for Integrated Chassis and Driveline Control** Zhang, Lidberg, Zhang	*TuC2-4* **Effectiveness Evaluation of Adaptive Forward Collision Warning Using Actual Vehicles** Machida, Mimuro, Takanashi	
16:20			*TuC2-5* **Comparison between Low-Speed and High-Speed Rear-End Incidents Using a Near-Miss Incident Database** Fujita, Raksincharoensak, Nagai	
16:45				
	TuA3: Traffic Control and Analysis Chair: Omae (Keio University)	**TuB3: Integrated Chassis Control** Chair: Lidberg (Chalmers University of Technology)		
16:40	*TuA3-1* **A Development of Signal Control System for Vehicle Traffic** Shimizu, Masuda	*TuB3-1* **Comparison between Optimum Yaw Moment Distribution Schemes with Braking and Active Front Steering** Yim		
17:05	*TuA3-2* **Multiple Vehicle Tracking and Estimation for All-around Perception** Kim, Song, Lee, et al.	*TuB3-2* **Collision Strength Estimation and Preemptive Steering Control for Post-Impact Vehicle Motion Control** Kim, Peng		
17:30	*TuA3-3* **Delay Spread Measurements of UWB communications in Automotive Vehicle** Mar, Basnet	*TuB3-3* **Contribution for Vehicle Dynamics with a Steering System which Controls Tire Angles and Steering Force Independently** Chai, Kimura, Igarashi		
17:55				

19:00 **ISCMeeting**

September 24, Wednesday

8:00-18:30 **Technical Visits**
19:00-21:40 **AVEC'14 Party**

September 25, Thursday

	Main Lecture Room (L0026)
9:00	*Plenary Session III* **The challenges in automotive and chassis engineering** Prof. Peter Pfeffer
9:50	

	Room A (L0011)	Room B (L0012)	Room C (L0013)	Room D (L0021)
	ThA1: Vehicle System Control Chair: Yu (HONDA R&D AMERICAS INC.)	**ThB1: Suspension Control I** Chair: Fukao (Kobe University)	**ThC1: Longitudinal Control Assist** Chair: Henze (TU Braunschweig)	**ThD1: Engine Control** Chair: Yamakado (Hitachi)
10:10	*ThA1-1* **Control Logic Testing for Mechatronic Systems: a Process Based on Model Simplification** Barale, Guillet, Alirand, et al.	*ThB1-1* **Order-reduction and μ-analysis of an H∞– controller Application to active suspension systems** Zebiri, Mourllion, Basset	*ThC1-1* **A Preceding Vehicle Following System Based on Haptic Communication** Ueda, Wada, Sugiyama	*ThD1-1* **Reduced Model of Engine Air Path System Using a LPV Approach** Ngo, Sename, Bechart, et al.
10:35	*ThA1-2* **Three 3-Axis Accelerometers on the Inner Liner of a Tyre for Finding the Tyre-Road Contact Friction Indicators** Niskanen, Tuononen	*ThB1-2* **Model Predictive Control of Regenerative Dampers with Acceleration and Energy Harvesting Trade-Offs** Clemen, Anubi, Margolis	*ThC1-2* **Enhanced ACC for an electric vehicle with regenerative capacity: Experimental results from eFuture project** Glaser, Orfila, Nouveliere, et al.	*ThD1-2* **A New Variable Valve Actuation System for Improving Efficiency of Diesel Engine** Khajepour, Yi, Sijun, et al.
11:00	*ThA1-3* **Incorporation of Adaptive Grid-Based Look-Up Tables in Adaptive Feedforward Algorithms for Active Engine Mounts** Hausberg, Hecker, Pfeffer, et al.	*ThB1-3* **On/Off Controllers Design: Experimental Results for Automotive Suspension Systems** Vivas-López, Tudón-Martínez, Hernández-Alcántara, et al.	*ThC1-3* **Driver Performance Level Estimation Method in Car-Following Situation Using Longitudinal and Lateral Control Driver Models** Raksincharoensak, Saigo, Nagai	*ThD1-3* **Computational Intelligence Approaches for Identification of Engine Performance under Ethanol-Gasoline Blends** Wong, Wong, Vong
11:25	*ThA1-4* **Physical Implementation of Ground Hook as Tire Damping Device and Influence on Vehicle Dynamics** Valasek		*ThC1-4* **Driver Assistant System to Anticipate Pre-Preceding Vehicle and Its Effect on Traffic Flow** Suzuki, Tanaka, Marumo, et al.	
11:50				

	ThA2: Autonomous Driving I Chair: Zlocki (Forschungsgesellschaft Kraftfahrwesen mbH Aachen (fka))	ThB2: Suspension Control II Chair: Shibue (Honda R&D)	ThC2: Driver Behavior III Chair: Marumo (Nihon University)	ThD2: EV Motion Control I Chair: Murata (Toyota Motor Corporation)
12:50	*ThA2-1* **Autonomous Ground Vehicle of Path Following Control through Model Predictive Control with Feed Forward Controller** Yakub, Mori	*ThB2-1* **Modeling and Integrated Control of an Electronically-controlled Air Spring and Adjustable Hydraulic Damper in a Hybrid Active Air Suspension System** Wong, Xie, Zhao, et al.	*ThC2-1* **Estimation of the driver's steering intention for preceding car with the brain current distribution estimation** Ikenishi, Kamada, Nagai	*ThD2-1* **A torque-vectoring control logic for IWM electric vehicles** Sabbioni, Vignati, Sironi
13:15	*ThA2-2* **A new longitudinal-motion assists control based on the combination of Adaptive Cruise Control and Preview G-Vectoring Control** Takahashi, Altmannshofer, Yamakado, et al.	*ThB2-2* **Active Sampled-Data Control of Suspension in Automobile with Vibration Manipulation Functions -Desired Elongation Control of Actuator with Road Preview -** Kotake, Kawakita	*ThC2-2* **Objective evaluation of the brake motion by means of passenger's reflex eye movements** Omura, Aoki, Obinata	*ThD2-2* **Enhanced Lane Following Control for a Multi-Traction Electric Vehicle through Integration of Active Steering and Differential Traction/Braking** Wang, Li, Jeng
13:40	*ThA2-3* **Stabilisation of Multiply-Articulated Vehicles in Reverse** Rimmer, Cebon	*ThB2-3* **Adaptive Roll Dynamics Control of Light Commercial Vehicles with Semi-active Electrorheologic Dampers** Gleichweit, Horn, Funke, et al.	*ThC2-3* **Driver Response to Automatic Braking under Split Friction Conditions** Tagesson, Jacobson, Laine	*ThD2-3* **Fault-Tolerant Global Chassis Control Based on Optimal Longitudinal/Lateral/ Vertical Tire Force Distribution for EVs** Cao, Luo, Li
14:05	*ThA2-4* **Regeneration of the Trajectory for the Automatic Parallel Parking with Geometric Continuous-Curvature Path Planning** Vorobieva, Minoiu-Enache, Glaser, et al.	*ThB2-4* **Optimal Control of Nonlinear Vehicle Suspension System for Improvement of the ABS Performance** Safvat, Mirzaei, Aghasizade, et al.	*ThC2-4* **Measurement on the feeling of "Bikkuri" at danger warnings** Sakata, Morimoto, Kido, et al.	
14:30				

	ThA3: Autonomous Driving II Chair: Mouri (Tokyo University of Agriculture And Technology)	ThB3: Suspension Control III Chair: Takehara (Kindai University)	ThC3: Testing Method and Evaluation Chair: Aoki (Nagoya University)	ThD3: EV Motion Control II Chair: Xiong (Tongji University)
14:50	*ThA3-1* **Effective Evaluation of ADAS and Automated Driving** Zlocki, Fahrenkrog, Eckstein	*ThB3-1* **Preview Ride Comfort Control Based on Road Surface Estimation Using Cameras and Active Light** Nakamura, Sugai, Matsumoto, et al.	*ThC3-1* **Driver-in-the-Loop Simulation for Advanced Driver Assistance Systems** Amelunxen, Schmidt	*ThD3-1* **Study on Full-Vehicle Model Integrating Vehicle Dynamics and Energy Consumption** Inoue, Ota, Hirano, et al.
15:15	*ThA3-2* **Integrated Vehicle Motion Control of Automated Vehicles for Integrated Risk Management in Dynamic Driving Environment** Kim, Kim, Yi	*ThB3-2* **Analysis of vehicle and driving condition influences on road classification from vehicle signals** Jansen, Schmeitz, Wouters, et al.	*ThC3-2* **Lane Keeping Assistance with Learning-Based Driver Model and Model Predictive Control** Lefèvre, Gao, Vasquez, et al.	*ThD3-2* **Active Fault Tolerant Torque Distribution Control of Electric Vehicle with Four Direct-driven Wheel Motors** Chen, Yu
15:40	*ThA3-3* **Stochastic Predictive Control of Autonomous Vehicles in Uncertain Environments** Carvalho, Gao, Lefèvre, et al.	*ThB3-3* **Observer Design of Semi-Active Suspension Using a Three-Axis Sensor** Matsuoka, Fukao, Kinoshita	*ThC3-3* **Gain of Efficiency and Robustness in the ESP®-Application Process using Vehicle Dynamics Simulation with DoE-Methods** Lutz, Baust, Steiner, et al.	*ThD3-3* **An Investigation on Dynamic Behavior of Different Three-Wheeled Vehicle Configurations** Soltani, Goodarzi, Khajepour
16:05	*ThA3-4* **An Autonomous Lanekeeping System for Vehicle Path Tracking and Stability at the Limits of Handling** Kapania, Gerdes	*ThB3-4* **Sensitivity analysis of a magneto-rheological damper model: A theoretical and experimental study** Hamza, Birouche, Basset, et al.	*ThC3-4* **Closed loop evaluation of wheel braking slip control strategies under asymmetrical road friction conditions** Bolia, Müller	
16:30				

16:45 **Closing Session**
AVEC'14 Summary
Best Paper Awards