

Session Program

Opening Session at Media Center 10F

Tuesday 15 October

Conference Hall-1

09:30-10:00 Opening Address:

Opening Speech

Takao Kodama

President, Osaka City University

Greetings

Toru Okutani,

Parliamentary Official, Ministry of Environment

Jun-Ichi Seki

Deputy Mayor, Osaka City

C. C. Chan

Chairperson of AEVC, Professor, The Chinese Academy of Engineering

Zhou Heliang

Executive Member of Electric Vehicle Association of Asia Pacific

10:00-11:40 Keynote Address:

10:00-10:20

KA-01

The Challenge and Opportunity of Electric Vehicles in the New Century

C. C. Chan

University of Hong Kong

10:20-10:40

KA-02:

On a Concept of Asian Electric Vehicle Conference

S. Minami

Department of Electrical Engineering, Osaka City University

10:40-11:00

KA-03:

Transportation Issues on Urban and the Environment

K. Sato

Graduate School of Engineering, University of Hokkaido

11:00-11:20

KA-04:

Reconsideration about the Diffusion of the EV

S. Kawakatsu

DAIHATSU Motor Co., Ltd.

11:20-11:40

KA-05:

Solid State Chemistry and Electrochemistry of Lithium Insertion Materials for Advanced Lithium-ion Batteries; An Electric Vehicle Application

T. Ohzuku

Department of Applied Chemistry, Graduate School of Engineering, Osaka City University

Oral Session at Tanaka Memorial Hall

Tuesday 15 October
Conference Hall-2

13:00-14:40 Oral Session-1: EV-1

13:00-13:20 EV-01:

Design and Manufacture of Small-sized Electric Vehicle Gentle for Elderly People

T. Kino, T. Tsuneishi, S. Nishiuchi, H. Sakamoto

Kochi University of Technology

13:20-13:40 EV-02:

A Novel Double-stator Permanent-magnet Electric Machine Used for Electric Vehicle

F. Chai, S. Cheng and S. Cui

Department of Electrical Engineering, Harbin Institute of Technology

13:40-14:00 EV-03:

Town Use Performance of a Small Electric Vehicle Using NMH Battery

T. Hirano and I. Fujimoto

Takushoku University

14:00-14:20 EV-04:

Sensor Reducing Technique in Vector Control of Induction Motors

Z. Chunpeng and L. Fei

Tsinghua University

14:20-14:40 EV-05:

Experimental Studies on the Consumptive Energy Required for an Electric Tractor

F. Mizunoe, M. Koike*, T. Takigawa*, A. Yoda* and H. Hasegawa*

Graduate School of Life and Environmental Science, University of Tsukuba

**Institute of Agricultural and Forest Engineering, University of Tsukuba*

14:55-16:35 Oral Session-2: EV-2

14:55-15:15 EV-06:

Development of a Regenerative Braking System Using Super-capacitors for Electric Vehicles

H. Nomura and T. Imai

Department of Electrical Engineering, Kochi National College of Technology

15:15-15:35 EV-07:

The Simulation of BJD6100-EV Bus

L. Sun and W. Bai

Electric Vehicle R&D Center

College of Vehicle and Transportation Engineering, Beijing Institute of Technology

15:35-15:55 EV-08:

A New Suspension Technology Optimized for Electric Vehicles

(Verifying Performance of 8 Wheel Tandem Wheel Suspension System with KAZ)

M. Onishi and H. Shimizu*

Graduate School of Media and Governance, Keio University

**Faculty of Environmental Information, Keio University*

15:55-16:15 EV-09:

Electric Middle Bus with On-line Charger

J. Du, L. Sun, H. He and F. Sun

School of Mechanical and Transport Engineering, Beijing Institute of Technology

16:15-16:35 EV-10:
Development and Evaluation of a Racing EV for Energy-saving Contest (EV Ecorun in SUGO)
M. Hattori, Y. Egashira, Y. Ohmori and T. Oizumi
Sendai National College of Technology

Tuesday 15 October
Session Room-1

13:00-14:20 Oral Session-3: HEV-1

13:00-13:20 HEV-01:
Turning Behavior of a Power-Distributed Parallel Hybrid Electric Vehicle
Y. Takada and T. Wakisaka

Department of Mechanical and Physical Engineering, Graduate School of Engineering, Osaka City University

13:20-13:40 HEV-02:
Study of Powertrain Configuration Design for Hybrid Public Bus
M. Liu, Z. Zhao, J. Li and Z. Tang
R&D Center China FAW Group Corporation

13:40-14:00 HEV-03:
A Few Remarks on Energy Economy Ability of the Hybrid Vehicles
K. Shimizu
National Institute of Advanced Industrial Science and Technology

14:00-14:20 HEV-04:
Design of an HEV Powertrain Control System
H. He, Z. Gu and F. Sun
Electric Vehicle R&D Center
School of Vehicle and Transportation Engineering, Beijing Institute of Technology

14:55-16:15 Oral Session-4: HEV-2

14:55-15:15 HEV-05:
Research and Development of High Efficiency and Low Pollution Series Hybrid System for Extra Low Floor City Traffic Vehicle

S. Kabe, A. Yamanaka, K. Wakabayashi**, M. Osada, S. Fuku***, H. Hagiwara****, T. Sato* and Y. Daisho******

Sawafuji Electric Co.

**Advanced Research Center for Science & Engineering, Waseda University*

***Kokushikan University*

****Okubo Gear Co.*

*****Toyo Radiator Co.*

******Waseda University*

15:15-15:35 HEV-06:
Study on Optimization Strategy of Dual Power Sources
M. Huang, H. Qiu and J. Liu*
Automotive Engineering Institute, Wuhan University of Technology
**Dongfeng-Citroen Automobile Company Ltd.*

15:35-15:55 HEV-07:

Several Measures for Extended Application of Series Hybrid Electric City Transit Bus
Z. Yang, H. Li, Z. Sheng and L. Xu
Jiangsu University

15:55-16:15 HEV-08:
The Design Characteristics of Plug-in Series Hybrid Electric Transit Bus
Z. Yang, X. Chen, D. Huang, S. Luo and M. Shi*
Jiangsu University
**Nanjing University of Aeronautics & Astronautics*

Tuesday 15 October
Session Room-2

13:00-14:40 Oral Session-5: Urban-1

13:00-13:20 Urban-01:
Urban Public Transport and Characteristics of the Cities with Particular Reference to Trams
E. Yanagisawa
Graduate School of Asia-Pacific Studies, Waseda University

13:20-13:40 Urban-02:
Some Trials on Traffic Operation including Huge Bicycles toward Better Road Situation in Shanghai
Z. Yu, Y. Hino, T. Uchida and N. Yoshida
Department of Civil Engineering, Osaka City University

13:40-14:00 Urban-03:
A Trial to Evaluate the Sustainability Based on the Relationship between Urban Style and Transport System -Towards the Realization of the Humanity Town-
Y. Ishii, Y. Hino, T. Uchida and N. Yoshida
Department of Civil Engineering, Osaka City University

14:00-14:20 Urban-04:
Study on an EV-Based Carsharing in Japan
H. Hiraishi, F. Nakamura and I. Okura
Yokohama National University

14:20-14:40 Urban-05:
Life Cycle CO₂ Emissions from Public Transportation Systems
Y. Kudoh, Y. Moriguchi, R. Matsuhashi* and Y. Yoshida*
National Institute for Environmental Studies
**The University of Tokyo*

14:55-16:15 Oral Session-6: Urban-2

14:55-15:15 Urban-06:
General View of Next Generation Public Transport System for Urban Use
H. Ohno, I. Mori* and T. Nakamura**
National Traffic Safety and Environmental Laboratory
**Motive Co.*
***Mitsubishi Research Inst.*

15:15-15:35 Urban-07:
A Research for Transfer System Building of Railway and Electric Bus in Beijing
Z. Liu, K. Kishi and K. Sato

Graduate School of Engineering, University of Hokkaido

15:35-15:55 Urban-08:
Estimation of Reduction Amount of Carbon Dioxide Emission by Introduction of EVs and a Proposal toward Widespread of EVs Based on Actual Vehicle Use Data
Y. Kondo
National Institute for Environmental Studies

15:55-16:15 Urban-09:
Transportation System in Pakistan and its Problems
R. Rizwan
Department of Electrical Engineering, Osaka City University

Wednesday 16 October
Conference Hall-2

09:45-11:25 Oral Session-7: Battery

09:45-10:05 Battery-01:
Summary of the Application of Speed Sensors and Speed Estimators in Induction Motor Vector Control
X. Wen, Y. Hua and J. Gao
Inst. of Electrical Engineering (IEE), Chinese Academy of Sciences (CAS)

10:05-10:25 Battery-02:
Reactivation Mechanism of Lead-Acid Batteries by Additives for EV and HEV
S. Ikeda, Y. Goto, Y. Mori, M. Uehara and A. Kozawa*
Dept. of Appl. Chem., Nagoya Inst. of Tech.
**ITE Battery Research Institute*

10:25-10:45 Battery-03:
Development and Implementation of Mesh Battery Model for ADVISOR
M. Huang and H. Gong
Automotive Engineering Institute, Wuhan University of Technology

10:45-11:05 Battery-04:
Effective Use of Midnight Power for Charging the Lead-acid Batteries HEVs Designed by the ITE Group
A. Kozawa, M. Yamashita, S. Ikeda*, J. C. Nardi** and S. Minami***
ITE Battery Res. Inst.
**Nagoya Inst. of Tech.*
***IT Head Office*
****Osaka City University*

11:05-11:25 Battery-05:
Reuse of Deteriorated Lead-acid Batteries by a New Reactivation Treatment in Four Cities of China: Beijing, Shanghai, Shenzhen and Shengdu
A. Kozawa, M. Yamashita, S. Ikeda*, Y. Tagawa**, J. C. Nardi*** and S. Minami****
ITE Battery Res. Inst.
**Nagoya Inst. of Tech.*
***Hosen Corp*
****IT Head Office*
*****Osaka City University*

Wednesday 16 October
Session Room-1

9:45-10:45 Oral Session-8: Policy

09:45-10:05 Policy-01:
Comparative Study between Shikoku EV Rally in Japan and Tour De Sol in USA
K. Miyashita
Naruto University of Education

10:05-10:25 Policy-02:
The Tour de Sol The Great American Green Car Race
J. Helwig
Memphis Digital Photography

10:25-10:45 Policy-03:
Real World Testing: The Safety and Performance Testing Protocols and Lessons Learned at the Tour de Sol
J. Helwig
Memphis Digital Photography

Poster Session at Tanaka Memorial Hall

Wednesday 16 October, 13:00-16:30
Poster Room

Group-1: EV

EV-P01:

The Study of EV Driving Range Influence Factors

F. Sun and Z. Wang

School of Vehicle and Traffic Engineering, Beijing Institute of Technology

EV-P02:

Development of Electric Off-Road Vehicle and Effect on Plant Growth by Microwave Power Transmission

A.Oida, H. Nakashima, J. Miyasaka, S. Ohnishi, S. Yamada, H. Matsumoto* and N. Shinohara*

Graduate School of Agriculture, Kyoto University

**Radio Science Center for Space & Atmosphere, Kyoto University*

EV-P03:

Electric Conditioning System for Pure Electric Bus

L. Sun, F. Sun, W. Bai and Y. Chang

School of Mechanical and Vehicular Engineering, Beijing Institute of Technology

EV-P04:

Efficiency of a Switched Reluctance Motor with High Silicon Steel 10EX900 at a Speed Range of 3,000-10,000 r/min

N. Tanaka, M. Hasegawa, T. Suzuki, A. Chiba and T. Fukao*

Department of Electrical Engineering, Faculty of Science and Technology, Tokyo University of Science

**Department of Mechanical Systems Engineering, Musashi Institute of Technology*

EV-P05:

Development of Small Electric Vehicles by Induction Machine Drive System

S. Yamaguchi, T. Onoda, T. Ikemoto and K. Fujii

Kyushu Kyoritsu University

EV-P06:

Utilization of Local Natural Energy Resources for Charging a Practical Small Electric Vehicle

T. Hashimoto, H. Inoue, H. Nagata, Y. Hattori, T. Yamamoto, Y. Asano and E. Sakata

Aichi University of Technology

EV-P07:

Development of Motor Driver (MWEV-MAX) for EV Race

T. Fukumoto, Q. Z. Yang, H. Fujita*, Y. Nakahira* and A. Saihara*

Myway Labs Co., Ltd.

** Osaka Sangyo University, Junior College*

EV-P08:

High Speed Bipolar Power Amplifier System

H. Gomi

NF Corporation

EV-P09:

Development of an Energy-saving Racing EV Using Brush-less DC Motor

M. Hattori, Y. Egashira, Y. Ohmori and T. Oizumi

Sendai National College of Technology

EV-P10:

Basic Research on Vibration Jump Type Transfer System

T. Ikemoto, T. Onoda, S. Yamaguchi and K. Fujii

Kyushu Kyoritsu University

EV-P11:

Designing the River Cruise Electric Boat

S. Minami

Department of Electrical Engineering, Osaka City University

Group-2: Battery

Battery-P01:

State-of-the-art of Energy Storage Technology for EVs in China

F. Sun, Y. Chang and L. Sun

Electric Vehicle R&D Center

School of Vehicle and Transportation Engineering, Beijing Institute of Technology

Battery-P02:

The Practical Performance of the Hybrid Boosting Charge System for Electric Vehicle

K. Sato, A. Yoshida, K. Murakami and Y. Tada

Tokushima College of Technology

Battery-P03:

The Framework of an Advanced Test Bench for EV Drive System and its Loading Simulation Method Analysis

F. Sun and Q. Song

Beijing Institute of Technology

Battery-P04:

Effect of Additive Materials in Lead-acid Automobile Batteries for EV's Deep-cycle Application

S. Minami, A. Kozawa* and Y. Kato**

Department of Electrical Engineering, Osaka City University

**ITE Research Laboratory*

***now at Omuron Co., Ltd.*

Battery-P05:

Research on Regenerative Braking of AC Motor Drive System for Electric Vehicles

J. Song, F. Sun, C. Zhang and L. Zhai

School of Vehicle and Transportation Engineering, Beijing Institute of Technology

Battery-P06:

Fuel Cell Impedance Measurement System

H. Gomi

NF Corporation

Battery-P07:

Design of EV Battery Management System

Z. He, C. Zhang and F. Sun

Electric Vehicle R&D Center

College of Vehicle and Transportation Engineering, Beijing Institute of Technology

Battery-P08:

A Pulse Quick Charger with RS232 Bus and CAN Bus of Electric Vehicle

Z. Wang and C. Zhang

Electric Vehicle R&D Center

College of Vehicle and Transportation Engineering, Beijing Institute of Technology

Battery-P09:

Development of the Vector Control System of Induction Motor for Electric Vehicle Drives

F. Sun and L. Zhai

Electric Vehicle R&D Center

College of Vehicle and Transportation Engineering, Beijing Institute of Technology

Battery-P10:

Modeling and Simulation of Lead Acid Battery for Electric Bus

L. Sun, W. Zhang, R. Wang and F. Sun

School of Mechanical and Transport Engineering, Beijing Institute of Technology

Battery-P11:

Simulating BFC6110-EV with ADVISOR

W. Bai and L. Sun

Electric Vehicle R&D Center

College of Vehicle and Transportation Engineering, Beijing Institute of Technology

Battery-P12:

The Theory and Appliance of the Pulse Quick Charger of Electric Vehicle

Z. Wang, C. Zhang, F. Sun and W. Zhang

Beijing Institute of Technology

Group-3: HEV & Urban & Policy

HEV-P01:

Parameters Selection of Hybrid Electric Transit Bus

H. He, F. Sun and X. Yu

Electric Vehicle R&D Center

School of Vehicle and Transportation Engineering, Beijing Institute of Technology

HEV-P02:

Development of a Flywheel Energy Storage System for a Hybrid Electric Vehicle

I. Takahashi, M. Sekimoto, K. Saito, M. Osada*, X. Liu* and Y. Tanaka*

Nagaoka University of Technology

** Sawafuji Electric Co., Ltd.*

HEV-P03:

Fuzzy Control Strategy for Hybrid Electric Vehicles with CVT

N. Feng, K. Li and X. Lian

State Key Laboratory of Automotive Safety and Energy, Tsinghua University

HEV-P04:

Characteristics of Brushless Single-Phase Synchronous Generator for the Hybrid System

T. Onoda, T. Ikemoto, S. Yamaguchi and K. Fujii

Kyushu Kyoritsu University

HEV-P05:

Tunable SFR (Spin-Flip Raman) Laser for *in-situ* Sensing of the Constituents in the Exhausted Gas

K. Miyazaki

Faculty of Engineering, Hiroshima Kokusai Gakuin University

Urban-P01:

EV Program of Demonstration Run, R&D and Industrialization in Beijing

F. Sun, L. Sun and Y. Chang

School of Vehicle and Transportation Engineering, Beijing Institute of Technology

Policy-P01:
A Proposal for an Internet-based Lead Battery Development System
I. Okazaki
Health and Environmental Research Laboratory

Policy-P02:
Research on Support System to the Human by Electromotion Drive
~Design of the Human Technology~
K. Fujii
Kyushu Kyoritsu University

Policy-P03:
Moving Medium and Drive System on Traffic Environment Improvement of Beijing City
K. Fujii
Kyushu Kyoritsu University

Policy-P04:
Proposal for “China EV Rally”
K. Miyashita
Naruto University of Education

Policy-P05:
Social Costs of Automobile Transportation and Subsidy to Promote the Use of Low Emission Vehicles
N. Kamioka
Research Institute for Local Initiative in Environmental Policies

Policy-P06:
Personal Cart System for Support of Elderly Person’s Walk
K. Takahara, T. Wakatsuki, H. Nozaki, R. Akiyama, H. Kawaguchi, Y. Ito* and H. Wakamatsu**
Muroran Institute of Technology
**Hokkaido University*
***Tokyo Medical & Dental University*