

15th International Symposium on Advanced Vehicle Control

AVEC '22

INTRODUCTION

The AVEC symposium has a long history and distinguished reputation as one of the attractive international conferences for vehicle systems dynamics and control. After the first symposium in Yokohama in 1992, AVEC has recently become internationally renowned as it has also visited Tsukuba, Aachen, Nagoya, Michigan, Hiroshima, Arnhem, Taipei, Kobe, Loughborough, Seoul, Tokyo, Munich, and Beijing. In order to succeed this accomplishment and to control future directions, AVEC Board has been organized as shown. The goal of AVEC is to contribute to the future research and development via the active exchange of knowledge and vision between 50/50 engineers in a wide range of vehicle control from industry and academia. The symposium of AVEC'22 will be postponed from the 2020 schedule due to Covid19. We aim to overcome this difficulty and make the symposium more resilient as a family of engineers for the future of vehicle dynamics and control even in the new normal era. The organizing committee cordially invites you to become a part of AVEC '22 for getting knowledge and impression about state-of-the-art research and development in advanced vehicle control through active discussions with various participants from industries and academic circles.

AVEC Board

Chair: S. Horiuchi (Japan)

Secretariat: P. Raksincharoensak (Japan)

M. Basset (France)	E. Coelingh (Sweden)
D. Cole (UK)	L. Eckstein (Germany)
T. Fukao (Japan)	J. C. Gerdes (USA)
T. Gordon (UK)	C. Hong (Taiwan)
K. Li (China)	G. Mastinu (Italy)
H. Mouri (Japan)	J. Pauwelussen (Netherlands)
H. Peng (USA)	P. Pfeffer (Germany)
M. Plöchl (Austria)	G. Rizzo (Italy)
M. Valášek (Czech Republic)	M. Yamakado (Japan)
K. Yi (Korea)	

AVEC Advisory Board

M. Abe (Japan) Y. Furukawa (Japan) P. Lugner (Austria)
M. Nagai (Japan) H. Wallentowitz (Germany)

ORGANIZED BY

AVEC '22 Organizing Committee in Society of Automotive Engineers of Japan, Inc. (JSAE) and Kanagawa Institute of Technology (KAIT).

In association with

International Association for Vehicle System Dynamics (IAVSD)
International Federation of Automatic Control, Technical Committee on Automotive Control (IFAC TC7.1)
Japan Society of Mechanical Engineers (JSME)
Society of Instrument and Control Engineers (SICE)
chassis.tech plus, Automobiltechnische Zeitschrift (ATZ)

ORGANIZATIONS

General Chair

H. Inoue (Kanagawa Institute of Technology)

International Scientific Committee

Chair: S. Horiuchi (Japan)

M. Basset (France)	M. Best (UK)
B. C. Chen (Taiwan)	D. Cole (UK)
K. Deng (China)	T. Fukao (Japan)
J. C. Gerdes (USA)	T. Gordon (UK)
P. Gruber (UK)	R. Henze (Germany)
K. Li (China)	S. Li (China)
G. Mastinu (Italy)	H. Mouri (Japan)
H. Nijmeijer (Netherlands)	J. Pauwelussen (Netherlands)
H. Peng (USA)	P. Pfeffer (Germany)
M. Plöchl (Austria)	P. Raksincharoensak (Japan)
G. Rizzo (Italy)	B. Schick (Germany)
A. Stensson Trigell (Sweden)	E. Tseng (USA)
M. Valášek (Czech Republic)	H. Winner (Germany)
M. Yamakado (Japan)	D. Yang (Sweden)
K. Yi (Korea)	

Organizing Committee

Chair: M. Yamakado (Kanagawa Institute of Technology)

M. Abe (Kanagawa Inst. of Tech.)	T. Fukao (Univ. of Tokyo)
Y. Furukawa (Shibaura Inst. of Tech.)	Y. Hattori (Woven Planet)
N. Hayashi (SUBARU)	R. Hirao (Hitachi Astemo)
T. Hiraoka (Univ. of Tokyo)	T. Hirata (Daihatsu)
S. Horiuchi (Nihon Univ.)	M. Izawa (Hitachi Astemo)
I. Kageyama (Nihon Univ.)	Y. Kano (Kanagawa Inst. of Tech.)
F. Kato (Mazda)	E. Katsuyama (Toyota)
S. Kawahara (JTEKT)	M. Kawakoshi (JARI)
N. Kouguchi (Yokohama Rubber)	H. Matsumoto (Bridgestone)
T. Matsumoto (J-QuAD)	M. Minakawa (DRI)
K. Morita (Mitsubishi)	M. Nagai (JARI)
M. Omae (Keio Univ.)	T. Osakabe (Suzuki)
P. Raksincharoensak (TUAT)	Y. Shibahata (Hitachi Astemo)
M. Shino (Univ. of Tokyo)	G. Shinozuka (Isuzu)
F. Sugasawa (TUAT-TLO)	J. Takahashi (Hitachi)
M. Tao (Nissan)	T. Toyoshima (Honda)
H. Urabe (Honda)	M. Yamamoto (Toyota)
M. Yoshino (Isuzu AEC)	

SYMPOSIUM TOPICS

The topics cover the wide range of advanced automotive control, but not limited to the following topics.

- Vehicle Dynamics Theory
- Steering, Brake, Tire, Suspension
- Chassis Control
- Powertrain
- Electrified Vehicles
- Active Safety Systems
- Driver-Vehicle Systems
- Advanced Driver Assistance Systems
- Autonomous Driving Systems
- Modeling
- Driver Model
- Identification and Estimation
- Sensors and Actuators
- Testing and Validation
- Other related topics in vehicle control

PAPER SUBMISSION

Prospective authors are requested to submit an extended summary in English, describing the problem definition, method and results expected or obtained. This should include figures and tables and is limited to two pages (A4) and approximately 1,500 words. Expected presentation area of topics is essential. PDF format is preferable. Successful authors will be required to submit a final manuscript of four pages in length. Further additional pages should not exceed two pages in length.

Submission website <https://avec2022.org/>

AWARD AND JOURNAL PUBLICATION

Awards will be made for the best papers in each of the significant categories of the symposium, judged by a panel of the AVEC international scientific committee. Outstanding papers selected by the committee will also be invited for publication in a special issue of Vehicle System Dynamics or International Journal of Automotive Engineering.

IMPORTANT DATES

Extended summary:	January 17, 2022
Notification of acceptance:	March 21, 2022
Final manuscripts:	June 06, 2022
Early registration:	June 06, 2022

SYMPOSIUM PROGRAM 2022

Online welcome reception:	September 12
Plenary & technical sessions:	September 12-16
Online special program:	September 14
Online AVEC party:	September 14

REGISTRATION

All delegates, including those presenting papers, are expected to register for the symposium. Registration includes right to download the symposium proceedings, book of abstracts, attendance at all plenary and technical sessions, Virtual reception and AVEC Party.

Symposium registration fee will be announced later

VIRTUAL SYMPOSIUM VENUE

The symposium will be based in Kanagawa Institute of Technology (KAIT).



Kanagawa Institute of Technology

CORRESPONDENCE

All inquiries and proposals concerning the symposium should be addressed to AVEC '22 secretariat:

E-mail : avec22@or.knt.co.jp

AVEC'22 ^{30th ANNIVERSARY}

15th International Symposium on Advanced Vehicle Control

September 12-16, 2022

Kanagawa Institute of Technology,
Kanagawa, Japan



Schedule

Extended Summary	Jan. 17, 2022
Notification of Acceptance	Mar. 21, 2022
Final Manuscript	Jun. 06, 2022
Early Registration	Jun. 06, 2022



<https://avec2022.org>
avec22@or.knt.co.jp

Organized by



AVEC'22 Organizing Committee in
Society of Automotive Engineers of Japan, Inc.



Kanagawa Institute of Technology (KAIT)