Plenary Session

Date: Wednesday, November 18
Time: 15:15 - 17:30
Place: Room 1009, 10F

Theme

The Environment Surrounding Small Engines and the Demanded Techniques Now and in the Future

We have focused on and discussed a number of topics in the past SETCs. Environmental protection and energy savings were major topics in particular, and safety issues for motorcycles and small vehicles have been increasingly crucial issues, too. The more SETC gets globalized, the more regional issues become important such as fuel quality and diversity. Taking all challenging-issues into consideration, we look back the original points associated with small engine technologies and will discuss about "Small Engines and their Concerns" with invited guests and experts at the SETC2015, Osaka.

Moderator

Prof. Jiro Senda
Professor, Dr. – Eng.
Department of Mechanical Engineering
Doshisha University, Kyoto, Japan

Education
1978 BSME, Mechanical Engineering, Doshisha University
1980 MSME, Mechanical Engineering, Doshisha University
1985 Dr. - Eng., (Ph.D.) Mechanical Engineering, Doshisha University

Research Work Experience
1984 - 1990 YANMAR DIESEL Co., Ltd. Technical Research Center

Career
1990 Assistant Professor of Mechanical Engineering, Doshisha University
1992 Associate Professor of Mechanical Engineering, Doshisha University
1998 - The present
Professor of Mechanical Engineering, Doshisha University Spray & Combustion Science Laboratory; http://comb.doshisha.ac.jp
Energy Conversion Research Center; http://www1.doshisha.ac.jp/~ene-cent/
2003 - 2008 Director of Energy Conversion Research Center
2004 - 2007 Dean of Library and Information Technology Center
1994 - 1995 Visiting Associate Professor of Mechanical Engineering, University of Wisconsin - Madison, Engine Research Center
2005 - Director of Energy Conversion Research Center

Awards
- Encouragement Award of the Japan Institute of Marine Engineering, 1992
- Research Award of Engine System Division of Japan Society of Mechanical Engineers, 1997
- Article Award of Japan Society of Automotive Engineers, 2001
- Article Award of The Institute of Liquid atomization and Spray Systems - Japan, 2001
- Best Paper Award of Journal of Engine Research, 2002
- Article Award of Japan Society of Automotive Engineers, 2005
- Special Recognition Award of SETC, 2012
- Contribution Award in Technical Fields Japan Society of Automotive Engineers 2015

Major Fields
Spray and Combustion Science/Internal Combustion Engine/Optical Measurements/Cavitation Phenomena/Modeling and CFD/Sustainable Urban/Design with Optimum Energy Application

Plenary Session

Speaker

Prof. Yasuhiro Daisho
Faculty of Science & Engineering.
Director, Research Organization for Next Generation Vehicles
Waseda University, Tokyo
Japan

Education

1966 - 1970 Bachelor, Dept. of Mechanical Engineering, Waseda University
1970 - 1972 Master, Mechanical Engineering, Graduate School, Waseda Univ.
1973 - 1976 Doctor, Mechanical Engineering, Graduate School, Waseda Univ.

Academic Experience

1976 - 1978 Research Associate, Dept. of Mechanical Engineering, Waseda Univ.
1978 - 1980 Assistant Professor, Dept. of Mechanical Engineering, Waseda Univ.
1980 - 1985 Associate Professor, Dept. of Mechanical Engineering, Waseda Univ.
1985 Professor, Dept. of Mechanical Engineering, Waseda Univ.
1986 - 1987 Visiting Professor, University of Wisconsin-Madison, U.S.A.
1998 Guest Professor, Shanghai Jiao Tong University, China
2010 - 2014 Dean, Graduate School of Environment and Energy Engineering, Waseda Univ.
Director, Environment Research Institute, Waseda Univ.

Recent Research Subjects

- Engine combustion and emissions, and alternative fuels in theory and practice
- Developments and performance evaluations of electric, hybrid and fuel cell vehicles
- Urban mobility and the environment
- Global warming mitigation and energy shift in the transportation sector

Academic and Social Activities

- Executive Vice President of Society of Automotive Engineers of Japan (JSAE), 2004-2006
- Fellow, the Japan Society of Mechanical Engineers (JSME)
- Fellow, the Society of Automotive Engineers, Japan (JSAE)
- Member, Environmental Council, the Metropolis of Tokyo, 1999-2006
- Vice President-Technical, FISITA (International Federation of Automotive Engineering Societies) 2008-2012
- Member, Central Environmental Council, Ministry of the Environment (present)
- Member, Council of Transport Policies, the Ministry of Land, Infrastructure and Transport (present)
- Member, Council of Resources and Energy, the Ministry of Economy, Trade and Industry (present)

Mr. Lukas Walter
Dipl. - Ing. / Vice President
Commercial Powertrain Systems AVL List GmbH
Austria

Education

1989 - 1997 Technical University of Vienna, Austria
Mechanical Engineering, Transportation Engineering
1983 - 1988 Engineering College TGM, Vienna
Electrical Engineering

Professional Career

2003/10 - present AVL List GmbH., Austria, Business Field Leader
Global responsibility for Business Field Commercial Powertrain Systems
2001/05 - 2006/10 AVL Autókut Engineering Ltd., Budapest, Managing Director
Management of AVL Hungary Tech Center for Commercial Diesel development
2006/04 - 2012/04 AVL List GmbH, Graz, Austria
Project Manager in Commercial Diesel development for European OEMs
2004/01 - 2005/04 AVL Powertrain Engineering Inc., Plymouth, MI, USA.
Skill Team Leader, Thermodynamics & CFD
1994 to 2001 Several positions for AVL in Austria and the USA

Plenary Session

Mr. Masahito Shibata
HDD Applicants
Kitsuregawa Technical Center
Professional Engineer Japan
(Mechanical Engineer)
Johnson Matthey Japan G.K.
Japan

Subject

Emission Control and Catalytic Systems of Non-road Diesel Engine

Career

1976 Master of mechanical engineering, Hokkaido University for the research on diesel engine combustion and exhaust odor
1976 Toyota Motor Corp.
Involved in engine combustion research
1987 Toyota Motor Europe
Vehicle and engine system survey
1991 Toyota Motor Corp.
Engine and exhaust catalyst system research
1999 JCAP, JAMA committee
Committed to the Combustion analysis working group
2003 Recognition
SAE Horning Memorial Award as the JCAP working group
2003 Johnson Matthey Japan
In charge of catalyst system development and applications
2003 Professional Engineer Japan (Mechanical Engineering)

Dr. Mitsuharu Oguma
Group Leader
Engine Combustion & Emission Control Group, Research Institute for Energy Conservation, National Institute of Advanced Industrial Science and Technology
Japan

Subject

Worldwide Fuel Trend

Education

1996 BSc in Mechanical Engineering from Ibaraki University
1998 MSc in Mechanical Engineering from Ibaraki University
2001 Ph.D. from Ibaraki University

Career

- Join National Institute of Advanced Industrial Science and Technology (AIST) from Apr. 2001
- Apr. 2001 NEDO fellow researcher in Institute for Energy Utilization at AIST
- Apr. 2003 Post-doctoral researcher in Institute for Energy Utilization at AIST
- Oct. 2003 Research Scientist in Institute for Energy Utilization at AIST
- Oct. 2009 Senior Research Scientist in Research Center for New Fuels and Vehicle Technology (NFV) at AIST
- Sep. 2010 Team Leader in NFV at AIST
- Apr. 2014 Leader in Collaborative Engine Research Team for Next Generation Vehicles at AIST

Award

1997 The Prize of Scholarship of the Japan Welding Society, “Characterization of Laser Induced Plasma in High Power Laser”
1998 The Best Presentation Prize of SVBL, Ibaraki University, “Fundamental Investigation of Alternative Fuels”
2006 The Asahara Prize of Scientific Encouragement, “Analysis of Particulate Matter (PM) Emitted from DME powered DI Diesel Engine - Evaluation of SOF Characteristics by Chemical Analysis -”, 56th JSAE (Society of Automotive Engineers of Japan) Awards, JSAE
2012 The Technical Paper Award, "Evaluation of DME Fuel Lubricity by HFRR Test Method", 62th JSAE (Society of Automotive Engineers of Japan) Awards, JSAE

Current Research Fields

The professional environment includes utilization technologies with new fuels such as DME, Bio-fuels etc. Standardization research is the most important study now. Convenor of ISO/TC28/SC4/WG13 (Standardization of DME fuel) from 2011.