

# Plenary Session

**Wednesday, November 4, 14:45 - 17:00 at Ballroom I & II**

**Theme: Future Technologies to Address Energy Security and Global Warming**

In the SETC 2009 Plenary Session, the role of small engine, its technology necessary for energy security, and countermeasures against global warming are to be discussed by professionals invited from various fields. Informative speeches and a panel discussion are scheduled. To make it attractive and valuable to all participants, this session includes various topics from wide range of fields with international flavors. We would like to discuss the approach to environmental issues common for all humanity.

**Moderator**

- 1990 Graduate from Tokyo Inst. of Tech. (Dr. of Engineering)
- 1990 Research Associate of Chiba Univ.
- 1994 Guest Researcher of Univ. of Texas, Austin
- 1995 Associate Professor of Chiba Univ.
- 2006 Guest Professor of Univ. of Karlsruhe in Germany
- 2008 Professor of Chiba Univ.

- 1995 JSME Research Encouragement Award
- 1995 JSAE Asahara Research Encouragement Award
- 2001 ILASS-Japan Best Presentation Award
- 2004 JSAE-SAE SETC Best Presentation/ Research Paper Award



**Prof. Yasuo Moriyoshi**  
**Professor**  
**Chiba University**

Major research topics

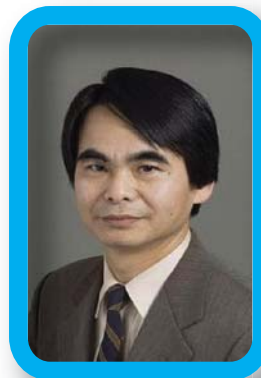
Analysis of gasoline engine knocking, fuel spray analysis, control of in-cylinder mixture formation, HCCI combustion analysis, nano particles calculation, new ignition system development, thermal control of IC engine.

# Plenary Session

## Speakers

### Subject : HCCI Combustion Challenge and Future

Norimasa Iida is a Professor in the Faculty of Science and Technology at Keio University, Japan. Professor Iida got his Ph.D. in 1983 from Keio University on the topics of propagation and extinction mechanisms of premixed flames flowing into a narrow channel from a combustible-gas-charged chamber. He spent a very productive year as a Visiting Assistant Professor working at the Engine Research Center, University of Wisconsin-Madison. He used to be a laboratory head of 'Low Heat Rejection Ceramics Two-Stroke Methanol Engine Project' at Kanagawa Academy of Science and Technology. His major research interest is in the combustion and emission of internal combustion engines. He is among the leaders in HCCI combustion research and has published more than 100 papers on the subject, most of which at SAE, JSAE and JSME. He has a special interest in life cycle assessment for next generation vehicles.



**Prof. Norimasa Iida**  
Professor  
Faculty of Science and Technology  
Keio University

### Subject : Future Trend of Market and Technology of Personal Vehicle Including Two-wheelers and Others

Vinay Harne is currently heading Research & Development Department as President (New Product Introduction). B.E. (Mech) from Gujarat University and M.Tech from IIT, Chennai, India. He joined TVS Group in 1982 as Research and Development Engineer. He has been involved in all the new engines developed by the company. He has worked on the areas of fuel economy improvement & exhaust emission reduction. He has also visited various universities and research laboratories in Europe and US as part of work at TVS Research & Development. He has published 5 international technical papers on engines.



**Mr. Vinay Chandrakant Harne**  
President  
Research & Development  
Department, TVS Group



# Plenary Session

## **Subject : Future Technical Trend for Fuel and Lubricant in Malaysia and Southeast Asian Countries**

Zulkurnain Abdul Rahman is currently the General Manager of Powertrain Technology, PETRONAS Research, a position he holds since 2007. His responsibilities cover all powertrain technology-related research and commercialization activities. Under his stewardship, PETRONAS under a joint development venture with BRP-Rotax successfully rolled out the Rotax 4-TEC 1200 engine in September 2008 for Bombardier Recreational Products snow mobile and personal water craft applications. Prior to his current position, he was the Senior Manager in PETRONAS Corporate Planning and Development Division. In this capacity, he was responsible for the PETRONAS FP1 Superbike commercialization programs. A mechanical engineering graduate from Lamar University, Texas,

he started his career as a project management executive in 1987 at PETRONAS Gas Berhad and later joined OGP Technical Services Sdn Bhd as a Project Manager in 1992. With experience in gas, petrochemical power plant and terminal constructions, he was then assigned to Trans Thai Malaysia (TTM) Ltd in 1997 to oversee the development of the gas pipeline systems linking field reserves in a Malaysia-Thailand Joint Development Area to Peninsular Gas Utilization pipeline system in Malaysia's northern state of Kedah.



**Mr. Zulkurnain Abdul Rahman**  
General Manager  
Powertrain Technology,  
Petronas Research Sdn.Bhd.

## **Subject : Technology of Small Electric Powered Vehicle and the Impact of Electric Vehicle on Global Environment**

Yoshihiro Nakazawa is a Chief Engineer for Motorcycle R&D Center of Honda R&D Co., Ltd. He began his professional career at Honda R&D in 1974. In 1990, he became Chief Engineer. In 1995, he transferred to Honda R&D Europe Italy Office as a Manager. After 1999, he returned to his previous department of Motorcycle R&D Center. During these period, he has designed a variety of innovative electrical devices and established unique technologies. As a project leader, he has developed many general purpose electric devices such as Side Stand Inhibitor System and Electric Scooter. In 1994, he published the Paper "Development of an Electric Scooter for Practical Use" in the JSAE Review. For the past 10 years, he

has supervised the Quality Management for all electric devices of Honda's products such as Motorcycle, ATV and Power Water Craft. He graduated from Kanagawa Technical High School in 1970. He holds more than 100 patents for electric technologies. His current research focus is in new Small Electric Vehicle that is well-balanced in safety, performance, ease of use, comfortable, attractive sales price and reduced environmental impact by the application of new environmentally friendly technologies.



**Mr. Yoshihiro Nakazawa**  
Chief Engineer  
Motorcycle R&D Center  
Honda R&D Co.,Ltd.