



DATE: Friday, June 8th, 2012

TIME: 4:00PM – 6:00 PM

VENUE: Conference Room, 6th floor, Kambaikan Bldg., Doshisha University



Speaker: Dr. Takayuki Takeshita

Lecturer, Transdisciplinary Initiative for Global Sustainability, The University of Tokyo

Speaker: Dr. Jean-Francois Mercure

Research Associate, Centre for Climate Change Mitigation Research, The University of Cambridge



‘Optimal vehicle technology and fuel strategies considering global warming, air pollution, and energy security concerns’ by Dr. Takayuki Takeshita

Abstract :

This presentation will evaluate the optimal technology and fuel strategies for the road transport sector over the 21st century considering the concerns on global warming, air pollution, and oil supply insecurity. The analysis is performed by using a global energy system model treating the road transport sector and the transport fuel supply chain in detail. In the first step, the result for the optimal technology and fuel choices in the road transport sector in a carbon-constrained world will be presented as a basis of comparison. Then, the effects of internalizing externalities related to air pollution and oil supply insecurity on the results will be assessed.

Speaker Profile:

Dr. Takayuki Takeshita earned his PhD in Science from the University of Tokyo in 2004. He worked as an Assistant Professor at the University of Tokyo between 2004 and 2008, and then joined Ritsumeikan University as a fellow in 2008. Since 2009, he has been Lecturer of the Integrated Research System for Sustainability Science at the University of Tokyo.

His research interest lies in energy system modeling and analysis, technology assessment, energy economics, and econometrics. He has been the lead author on 13 peer-reviewed international journal articles and book chapters, and also is an expert reviewer of the IPCC Fourth Assessment Report.

He has received 7 national and international awards for his achievements and been listed in some of the world’s well-known biographies such as Marquis Who’s Who in the World.

‘Modelling CO₂ emissions, technological change and the use of natural resources’ by Dr. Jean-Francois Mercure

Abstract :

The evolution of future greenhouse gas emissions given existing and potential future energy and environmental policies depend crucially onto future choices of technologies for power production, transport, industrial and domestic uses of energy. This presentation introduces an approach for modelling greenhouse gas emissions from fuel use, where the evolution of energy technologies is represented based onto three simple principles: technology diffusion, learning-by-doing and natural resource limits. This theory and computational approach, currently applied in our model to the power sector, will be extended in the future to all major fuel use emissions sectors of the global economy.

Speaker Profile:

Jean-Francois Mercure is a researcher at the University of Cambridge, modeling global greenhouse gas emissions from energy use. He has a background in solid state physics, with a PhD from the University of St Andrews (2004-08), followed by a research position at the University of Bristol (2009-10). He subsequently moved to the University of Cambridge in 2011 to work on energy systems, creating computational models to study the dynamics of technological change involved in reducing energy-related global greenhouse gas emissions. Recent work includes "Global Electricity Technology Substitution Model with Induced Technological Change" (Tyndall Working Paper 148, 2011), "FTT: Power: A global model of the power sector with induced technological change and natural resource depletion" (under review at Energy Policy) and "An assessment of global energy resource economic potentials", (submitted to Energy Economics).

The lecture and Q&A will be in English

Co-organized by:

Kyoto Shiga Sustainability Institute

and

Institute for Technology, Enterprise and Competitiveness (ITEC)

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