

# Symposium on Transformative Knowledge Management

*Knowledge transformation  
for planetary well-being*

December 12<sup>th</sup> Tuesday, 2023

@ JAIST Ishikawa KS Lecture hall / WebEx (online)

Registration site: <https://forms.gle/UhRjqYquXeL9H8Cn7>



13:00-13:10      Opening

## **Business model and sustainability**

**13:10 – 13:55      Gaining Sustainable Performance through Green  
Keynote 1      Servitization**

Assoc. Prof. Satirenjit Kaur Johl, University Teknologi PETRONAS

**13:55 – 14:15      Sustainable service leadership and its educational  
framework**

Prof. Kunio Shirahada (JAIST research)

## **Sustainable resource management**

**14:25 – 15:10      The effect of both sides operational flexibility in capacity  
Keynote 2      investment under uncertainty**

Prof. Motoh Tsujimura, Doshisha University

**15:10 – 15:30      Revisiting the water environmental science in Orlicz spaces**  
Assoc. Prof. Hidekazu Yoshioka (JAIST research)

## **Biodiversity and sustainable tourism**

**15:40 – 16:25      Multiple utilization of biodiversity in Sarawak, Malaysia  
Keynote 3**

Prof. Satoshi Yamashita, Forestry and Forest Products Research Institute

**16:25 – 16:45      Collaboration with outsiders in advancing community based  
social development**

Prof. Asami Shikida (JAIST research)

**16:50 – 17:15      Student research, TBA**

**17:15 – 17:20      Closing**



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**Satirenjit Kaur Johl**  
(Keynote 1)

Dr. Satirenjit Kaur Johl is currently an Associate Professor at the Universiti Teknologi PETRONAS. She holds the position as the Postgraduate Leader for Management. Prior, she was attached with Universiti Utara Malaysia she also served the corporate sector, namely IBM and Boustead Holdings.

## Gaining Sustainable Performance through Green Servitization

There has been a growing concern over climate change whereby it is expected to fuel the demand for sustainable development practices. Manufacturing companies are being pushed to make changes to their offerings, processes, and business models in response to increased consumer preference for environmentally friendly products and solutions. Companies may distinguish themselves apart from their rivals and gain a competitive advantage by using servitization and it has increasingly moved away from solely based on servitization to embracing environmentally friendly service provision, commonly known as "green servitization". The successful application of green servitization requires the integration of eco-centric initiatives towards achieving firm sustainability performance.



**Kunio Shirahada**  
(JAIST)

Kunio Shirahada is a professor and director of TKM, JAIST. His research interests include Transformative Service Research (service sustainability, community revitalization for collective well-being creation, service for the elderly), and innovative organization design. He has published papers in the Technological Forecasting and Social Change, Technology in Society, Journal of Service Theory and Practice, Journal of Business Research, and so on.

## Sustainable service leadership and its educational framework

Sustainable service leaders are needed to meet the goal of a decarbonized society toward 2050. In this talk, I propose a vision of its leadership. What is needed as an educational model and research for developing sustainable service leaders based on transformative knowledge management, service science, and well-being marketing will be discussed.



**Motoh Tsujimura**  
(Keynote 2)

Dr. Tsujimura is a professor of Operations Research at Graduate School of Commerce, Doshisha University. His research interests lie in the area of finance, operation research, and resource and energy economics. His most recent research focuses on a firm's strategic decision-making under risk/uncertainty.

## The effect of both sides operational flexibility in capacity investment under uncertainty

This research analyzes a firm's capacity expansion and reduction problem under uncertainty. The firm expands (resp., reduces) the capacity if the output price is sufficiently large (resp., low). Consequently, the firm has two types of operational flexibility. The firm faces uncertainty about the output price and cannot uniquely identify its distribution. Then, the firm decides its managerial strategy under uncertainty in the sense of Knight (1921). To deal with the uncertainty, we employ the k-ignorance approach. We reveal the effect of each operational flexibility on the firm's decision-making under uncertainty.



**Hidekazu Yoshioka**  
(JAIST)

Hidekazu Yoshioka is an Associate Professor of TKM, JAIST. He got a doctoral degree of agriculture at Kyoto University in 2016. He is interested in mathematical and numerical analysis of physical, biological, chemical, and decision-making problems arising in civil, environmental, agricultural, and fisheries engineering. He is currently a member of IEEE.

## Revisiting the water environmental science in Orlicz spaces

Water environmental science is a research area to investigate and manage quality and quantity of surface and subsurface water bodies from physical, biological, chemical, and social viewpoints. Target phenomena of interest in water environmental science are often (misspecified) long-memory stochastic processes. A drawback of the current water environmental science is the lack of a unified mathematical framework to deal with the mutually-interacting different viewpoints mentioned above. The objective of this contribution is to briefly introduce our challenge using the notion of Orlicz spaces, a class of Banach spaces, to mathematically deal with the processes observed in river environments in a goal-oriented way.



**Satoshi Yamashita**  
(Keynote 3)

Dr. Yamashita is a professor at Forestry and Forest Products Research Institute, Japan. His research interests include biodiversity, fungal ecology, insect ecology, and tropical forests management. He has published papers on leading journals in ecological science such as Fungal Ecology, Molecular Ecology, TROPICS, Ecological Entomology, and so on.

## Multiple utilization of biodiversity in Sarawak, Malaysia

Kenko-hoshi described a life with sufficient food, clothing, shelter, and medicine as a rich life in his essay "Tsurezuregusa", and this still holds true today. Recent studies revealed high biodiversity increases ecosystem services, such as provision of biological materials. Basic information on biodiversity has not only academic value and contribution to the provision of material services, but also has value as an intellectual resource that can be used to develop human resources for science and technology and to promote the tourism industry. Tropical Southeast Asia is one of the most biodiverse regions on earth, but the full extent of its biodiversity is still unknown. A current social and ecological project to establish an autonomous and sustainable biodiversity utilization system will be introduced in the presentation.



**Asami Shikida**  
(JAIST)

Asami Shikida is a Professor of TKM, JAIST. He served as Chairman of the Wildlife Conservation Society for six years beginning in 2005. In 2010 He was named a member of the Shiretoko World Natural Heritage Site Regional Liaison Committee (responsible for the Ecotourism Working Group). His areas of specialization are ecotourism and community management. Published works include the books "Ecotourism from the community" and "Community branding for tourism" along with numerous research papers.

## Collaboration with outsiders in advancing community based social development

There has been an increase in the importance of community-based development, one of the critical elements of the SDGs oriented society, in order to increase sustainable development. In this process, we often observe contributions from outsiders to help support indigenous development processes. The involvement of outsiders in the community development process may help increase empowerment for the local community. However, the process and mechanism of effective involvement from outsiders have not yet been specified. This presentation aims to describe the role of outsiders in the community development process by discussing the creation of knowledge between locals and outsiders. It also focuses on the diversity of outsiders and multi-stakeholder collaboration.