

March 2014



Messages from the Faculty

Thoughts Prior to Leaving Keio SDM

I joined Keio SDM when it was founded in April 2008 and am finishing my term this March. During the six years that I have been with Keio SDM, I taught courses on systems engineering, dependable systems, electronic system safety and others while supervising Master students' research. Prior to joining Keio SDM, I was employed as an engineer at an automobile company. Thus, I was completely new to being an academic faculty member. However, I imagined that my professional experience in human resource development and project management would be relevant to my educational activities at Keio SDM, as they were significant aspects of my work along with the technical development. I was right about this in some instances, but wrong in others. Contrary to my expectations, Keio SDM covered themes much wider in scope than I had imagined, i.e., that of society. At first, I was not entirely sure whether the methods of systems engineering could be applied to social designs. However, eventually I came to understand

the importance of incorporating social systems through teaching. In other words, I realized that systems engineering has limitations, because it only targets technical systems. As I changed my work from being an engineer at an automobile company to a faculty member at a university, I began to understand the important role of a university within a society: to help indicate in what way society and its technologies should be developed and to provide the means for achieving this. I greatly enjoyed the intellectual excitement at Keio SDM; many pioneering activities are carried out here. The six years I spent at Keio SDM went by in the blink of an eye. I will continue my research and remain close to Keio SDM. Please do not be a stranger and say hi when you see me around!



Shoichi Sasaki, Professor
Graduate School of System Design and Management

This will be my last article in the SDM newsletter as I will be leaving Keio to begin a new job from April 1st, 2014. I would like to thank all of those in SDM as well as its supporters who have made my three years experience there very rich and rewarding. Looking back, I think I have really learned as much as I have taught at SDM.

When I first heard of Keio SDM, I had only a dim idea of how the concepts of systems, design, and management came together. All that I knew, after my first guest lecture (something about Julian Assange and Wikileaks in 2010), was that this was a very ambitious and innovative graduate school with a gorgeous campus and a fascinating mixture of mature, professional, and young students. That first impression remains with me to this day.

Before coming here, I never imagined I would be giving academic advice on research about systems involving automotive supply-chains, satellite signals, happiness and personal breakthroughs, traditional Tohoku dance, fruit and vegetable display designs. All of these are some of the few master's dissertations I had the pleasure of listening to and assessing. Those back to back 10-hour days (from 9 in the morning to 7 at night) of listening to presentations by master and doctor students were one of the most physically exhausting experiences at Keio SDM. But looking back, it was also a very rewarding opportunity to hear cutting edge research presentations from all sorts of domains.



I also learned much from giving social science methods and political science classes to students who did not necessarily have prior background in these disciplines. Teaching these courses forced me to distill key concepts and data most important and useful for a lay audience. The feedback and questions about politics from mature students of various professional backgrounds in my classes was very stimulating as well.

Although I will be focusing more closely on my own specialty, both in teaching and research, in Kansai, I hope to bring with me many of the valuable lessons learned at SDM. I look forward to watching and contributing to SDMs future success as it soars to new heights of innovation in research and education. Good luck SDM!

Ken Victor Leonard Hijino, Associate Professor
Graduate School of System Design and Management

TOPIC

1

Keio Innovative Design School Extension Lecture: "What Does It Take To Create a Happy Society"



The Workshop for Becoming Happy

On Sunday, February 23, 2014, an extension lecture of the Keio Innovative Design School, "What Does It Take to Create a Happy Society", was held in the Collaboration Complex on Hiyoshi Campus. Nearly 100 participants attended the lecture. Professor Maeno led the morning session, which was titled "The Workshop for Becoming Happy". Participants were divided into groups and shared their goals with one another, what they were thankful for, as well as their concerns and problems based on the four-factor model of well-being. Keio SDM students then facilitated a workshop, "The Workshop for Making Society Happy", in which participants worked in groups to discuss ideas for creating happy towns. Finally, Professor Toshiyuki Yasui led a session on the making and presentation of "happy town" prototypes. Each group presented its ideas in the form of puppet plays. A high level of satisfaction was observed among the participants. The event was a success, as many of the participants expressed the desire to learn more about the topic.



The Workshop on How to Create 'Happy Town' to Live in

TOPIC

2

Keio SDM & TU Delft TPM's Collaborative Extension Lecture: "Metropolis Revolution – From European Viewpoints" on Tuesday, February 25, 2014

As the world continues to rapidly become globalized, metropolises such as New York, London, Tokyo and Paris are increasingly influencing technological innovations and the ways in which nations are governed. As an expert in the roles that metropolises play in a modern society, Professor Theo Toonen, Dean of the Faculty of Technology, Policy and Management at Delft University of Technology (TU Delft TPM), spoke about the current situation concerning European integration through the analysis of actual cases. It was an exciting lecture, and Keio SDM students and various other individuals filled the venue. With the kind support of the Embassy of the Kingdom of the Netherlands in Japan, Keio SDM has been collaborating with TU Delft TPM since 2009 in a range of areas to create effective partnerships in educational research.

TU Delft TPM:

- ▶ <http://www.tbm.tudelft.nl/en/>



Professor Theo Toonen speaking at the extension lecture

TOPIC

3

Final Lecture by Professor Shoichi Sasaki



On Saturday March 8, 2014, Professor Shoichi Sasaki presented his final lecture titled, "The Ways People Live and the Future of Mobility". The lecture included a wide range of insightful topics on large scale, including the ways in which parents and child live, Japan as East Asian, nuclear power and safety/security, what a future world might look

like in the 2020s and 2030s when electronic vehicles dominate society and the possibility of flying automobiles. Professor Sasaki told the audience that he had learned much while teaching at Keio SDM, which reflects Keio SDM's spirit of *hangaku hankyo* ("learning while teaching, teaching while learning"). Finally, a question and answer session was held out

in a conciliatory mood. Professor Sasaki shared his views, from technical matters to life philosophy, through which the audience could glimpse at his sincere personality. Professor Sasaki has been one of the key figures at Keio SDM since its foundation. It was a wonderful lecture, signifying his significant contribution to Keio SDM.

TOPIC

4

New Publication: *Change the World with System x Design Thinking – “How to Innovate” by Keio SDM*

Keio SDM has been actively pursuing project-based learning (PBL) activities for innovation. One example is the Design Project, which is one of the required subjects of Keio SDM Master's course (Project Subject). Generally, teams composed of various actors carry out the PBL activities, including industry-academia-government-collaboration, training for private firms and entities, joint research with private firms and entities, as well as consulting services for private companies. In 2013, Keio SDM took part in a project supported by the Ministry of Education, Culture, Sports, Science and Technology, titled "Development of Dialogue Tools for Innovation". Through this initiative, we have applied Keio SDM's methods in order to connect

the seeds (ideas) developed by universities across Japan to the needs of the society. Having received many requests from various sectors, we published a book titled, *Change the World with System x Design Thinking – “How to Innovate” by Keio SDM* (Nikkei Business Publications, Inc.) in March 2014. The book summarizes the methodologies and methods used in the PBL activities. The book is printed in color and has a casual yet appealing square shape. It starts with a definition of innovation and goes on to explain the Design Project's ways of thinking and its procedures, including an explanation of sixteen key methods, in addition to providing a section on questions and answers.

Dean Takashi Maeno is the author and editor of

the text, with co-authors Guest Professor Toshiyuki Yasui, Associate Professor Seiko Shirasaka, Yoshikazu Tomita (part-time lecturer), Project Assistant Professor Kanenori Ishibashi, Hiroyuki Yagita (part-time lecturer) and Toru Iwata (researcher). This text will be utilized for the Design Project and for various other activities. We are committed to instilling our activities within wider society.



TOPIC

5

The Agriculture Laboratory in a New Book, *Let's Become Happy with Agriculture in Rural Towns*

Project Professor Mikako Hayashi published, *Let's Become Happy with Agriculture in Rural Towns – With an Eye Toward Rural and Urban Symbiosis* (Azumi Publications, Inc.), a text based on the activities of the "AGRI" (agricultural) laboratory supported by Norinchukin Bank. The book contains a collection of dialogues between Project Professor Hayashi and agriculture practitioners/experts encountered during the laboratory's research activities and field visits on the topic of the future of agriculture, rural areas and regional revitalization. The book highlights how activities that promote

rural and urban symbiosis with a focus on "the cycle of information", "the cycle of human resources" and "the cycle of economy" can lead to the vitalization of both rural and urban areas. It then suggests multi-dimensional measures for achieving sustainable regions and happy societies. The book covers a variety of topics and includes a round-table talk by Professor Maeno and four former Agri-laboratory members about the future of agriculture, as well as a column on regional revitalization.

To celebrate the publication of the book, the Rural-Urban Symbiosis Forum was held in Sapporo on

Tuesday, March 4, 2014. Additionally, a seminar titled, "How to Develop Business Models Utilizing Agriculture and Rural Resources" will be held in Tokyo at 2pm on Thursday, March 27, 2014. More details can be found at <http://www.noutokyousei.jp> (in Japanese)



Laboratory / Center profile

Smart System Design Laboratory

Representative: Associate Professor Naohiko Kohtake

<http://www.ssdlab.sdm.keio.ac.jp/en/>

Overview

The Smart System Design Laboratory does not limit its areas of research. We capture everything as a system and pursue the creation of valuable and smart systems. We attempt to do this by picturing what the system should look like in a society after five years and ten years, and by utilizing system thinking, design thinking and management capabilities that we learn at Keio SDM. The laboratory members have diverse interests, including innovation, medicine, space development, indoor and outdoor positioning, emergency medical service, space design, support for the persons with disabilities, information communication, independent flight, sports, regional revitalization, geospatial information, human interface, big data, facilitation, process improvement, disaster prevention and reduction, as well as town development. Naturally, the members also have diverse backgrounds. In accordance with their interests, they conduct research in the pursuit of new innovations for society. The laboratory's demonstration experiments are carried out not only in Japan but also in Asia, the US and Europe.

Research Areas

Our research currently focuses on but is not limited to the following four themes. Each theme is followed by keywords.

Space Systems

Space services, satellite positioning, international standards, seamless positioning, interoperability, earth observation monitoring, micro-satellites, dual use, disaster prevention and reduction and remote sensing

ICT

location-based services, open data, behavior analysis, system dynamics, geospatial information systems, big data, human interface and ubiquitous computing

Community Design: Town Building, Regional Revitalization and Health Care

Smart cities, social capital, social centered design, local branding, facilitation, future centers, future session and health literacy

Innovation

ideathon, design process, hackathon, business model, visual thinking, fieldwork, prototyping, workshops and social networking

Design Studio

In April 2012, together with the Ubiquitous Communication Laboratory, the Smart System Design Laboratory established a "smart space", which functions as both a workshop venue and a design studio in the West Building of Hiyoshi Campus. Students were the main contributors to creating this smart space, from designing the space to doing painting. It now hosts various events, such as workshops for local and business communities, prototyping using a 3D printer, receiving satellite signals, as well as functioning as a work base for the laboratory.



Group photo of the laboratory members



Joint demonstration experiment for the "smart city" with the Asian Institute of Technology, Chulalongkorn University, Tokyo University of Marine Science and Technology, the University of Tokyo and other relevant companies in Bangkok



Design Studio (West Building, Hiyoshi Campus)

