Message from the Faculty

“Thinking with your hands” in system design

Since its inception, one of the key ideas behind education and research at the Graduate School of System Design and Management (SDM) has been “see the trees and also the forest.” In actual practice, however, it is extraordinarily difficult to do this in system design. Understanding the details of the trees means using your hands, and understanding the forest means using your brain and your hands. The philosopher Immanuel Kant once said that the hands are a second brain. We use our hands to collect data, make drawings, build prototypes, give form to our ideas, and view objects and phenomena objectively. This second brain has, thanks to the advances of science, acquired new tools and expanded its functions. Getting our hands on the compass and ruler allowed human beings to work with geometrical concepts; learning programming and IT skills allows us to use computers as extensions of our own brains. Today, smartphones and tablets continue to expand the functions of our hands. The practice of system design continues to evolve.

Tetsuro Ogi, Professor
Graduate School of System Design and Management

An exchange student from Delft University of Technology (TU Delft) in the Netherlands presented his final report on Wednesday, January 25, 2012. Nick Venderbosch of the university’s Faculty of Technology and Policy Management (TPM) gave a lively presentation in which he related his reasons for choosing to study in Japan during the uncertain times after the earthquake and described the lectures that he attended at Keio University, the friendships that he made outside of school, and his travels around the country. He was particularly proud of being a member of the Adidas team that earned the Kos ISHII Award, the prize for excellence, in the international design project ALPS (Active Learning Project Sequence). SDM is currently hosting Lilyana Lee and Steven Ankersmit from TU Delft. Since 2009, it has welcomed a total of eleven students from TU Delft, an indication of the strength of the exchange program. In January 2012, SDM also welcomed Satadru Roy of Purdue University in the United States. They bring a welcome perspective to the educational and research environment at SDM.
DY2011 study abroad programs (short-term)

During AY2011, a total of eight students from SDM went abroad to further their studies. This issue features reports from three students who left on three-month programs in the summer of 2011 and returned before the end of the year.

Experiences studying at Purdue University
Aria Iwasawa (2nd year masters course)

I’ve looked out at the wings from my airline seat many times, but my experience abroad has changed what I see. In August 2011, I left for a three-month exchange program at the School of Aeronautics and Astronautics of Purdue University (Indiana, USA). At Purdue, I studied under Professor William Crossley, an expert in the optimization of complex systems, and did research on optimization techniques and decision-making when confronted with conflicting engineering requirements. In classes on the engineering requirements.

Experiences studying at Purdue University
Shusuke Morimoto (2nd year masters course)

I was only abroad for a short period of time, but was able to move forward on my research and make many new friends in the university and the community. I studied at the School of Aeronautics and Astronautics of Purdue University under Professor James Garrison, an authority in my research field of using GPS for seamless indoor and outdoor positioning. I attended classes, but there are large numbers of Germans, Chinese, and Indians studying alongside the Dutch students.

PhD Dissertation Jury and posthumous doctoral thesis

This research examines ways to create a collaborative, distributed design framework as well as present rework in collaborative international environments for the design of consumer products by viewing the physical spaces between the modules as another module, by using SysML to describe the relationships between the modules, and by using DSM to express the interdependencies among distributed design tasks.

Green Policies for Clean Energy Vehicles Using Life Cycle Assessment
Tomomi Nonaka
This research into socio-technology policy examines combinations of environmental taxes and technology (batteries, etc.) in the spread of environmentally friendly automobiles. It proposes a policy-formulation framework and uses detailed lifecycle data to simulate and verify its impact. In true SDM spirit, it examines both the details and the big picture.

Posthumous doctoral thesis
(candidates passed away just prior to jury)

Empirical research into the use of human behavioral psychology to prevent food-production scandals
Toshio Ishikawa
This research uses working-level observations of the psychological background behind food-production scandals and combines them with surveys and interviews to provide new perspectives on the organizational culture and worker solidarity required to find fundamental solutions.
Master’s Thesis Jury

As is customary, on February 10 and 11, 2012, SDM convened the Master’s Thesis Examination Committee to hear presentations on a wide range of topics in both technology systems and social systems. Outside jury members gave the master’s theses high marks for addressing real social concerns and using systems engineering principles in detailed system design and verification & validation.

VSE Center sponsors process improvement seminar

On Wednesday, January 25, 2012, the “1st 1-Day Hands-On Seminar with the SPINA3CH Autonomous Improvement Method” was held under the sponsorship of the VSE Center at the SDM Research Institute and with support from the Information-technology Promotion Agency, Japan. During the seminar, VSE Center lecturers explained the eight steps of the “SPINA3CH autonomous improvement method” developed by the Information-technology Promotion Agency, Japan for process improvement activities in software development and gave the participants the tools to implement each step. Using these steps and the insight they have gained during the software development process improvement activities so far, the participants can further improve their skills on with self-study, yet keep an eye on the big picture.

We plan to hold additional seminars and practical tests several times between now and June 2012.

“Training Tour for Young People” proposed by AGRI laboratory students comes to life in Mogami, Yamagata

The “AGRI” (Agricultural) laboratory, which is made possible by a donation from Norinchukin Bank, toured the Tohoku area in August 2011. One of the towns they visited was Mogami in Yamagata Prefecture where a “Community Treasure Hunting Workshop” was held. During the workshop, students proposed “training tours for young people” in which “snow shoveling volunteers” would help the town while experiencing for themselves the region’s bitter cold. Town officials welcomed the idea, and the tour took place on January 14-15, 2012. Five 1st year master’s course students participated as monitors from the laboratory.

Students were overwhelmed by the snow-covered scenery and how different the town looked compared to last summer. They helped out in the annual “Osaito Festival” and cleared snow from the homes of elderly residents who live alone. Participants reported that they had no idea how difficult life was in this region before the tour. It did indeed give them “training” and also warm friendships with local residents. They plan to go back to Mogami in late February with a proposal for an effective tour plan after they have had a chance to study local marketing perspectives.

“International Symposium on Yoshiwara and Ukiyoe”

On December 3-5, 2011, the “International Symposium on Yoshiwara and Ukiyoe” was held at the Japan Ukiyoe Museum in Matsumoto under the co-sponsorship of the SDM Research Institute. Along with theater, Yoshiwara was one of the central facets of Edo culture. However, research to this point has focused on narrow, individual issues such as legal systems, public morals, ukiyoe, kabuki, haikai, and kyogen. Edo was one of the world’s largest cities in the 19th century, and understanding its society and culture requires an ability to “see the trees but also the forest,” a perspective that led to SDM sponsoring the symposium.

The panel discussion included participants from the Netherlands, France, the US, Korea, and China. From SDM, Professor Tetsuro Ogi presented “Perspectives in Ukiyo-e and Digital 3D Ukiyo-e” and the lecture by Former Professor Takeshi Hibiya (Executive Advisor of the SDM Research Institute) was titled “Evidence-based Study on the History of the House Izumi-ya.”

http://www.sdm.keio.ac.jp/en/
Laboratory / Center profile

Comparative Political Systems Laboratory

Representative: Associate Professor Ken Victor Leonard Hijino
Areas of expertise: Comparative political institutions, party organization theory, comparative systems of local politics and local democracy

The faculty and students at SDM research systemic solutions for a range of pressing global issues such as: energy, food, and climate security; domestic social welfare provision; education reform; and the reviving of local communities and economies. In many of these domains, technical and/or substantial solutions to the problems seemingly exist, but are not implemented because of a clash of vested interests and an inability to reach effective collective agreement on the matter among stakeholders. The Comparative Political Systems Laboratory (CPSL) focuses on such diverging requirements between stakeholders in social systems. Its frame of reference is “politics”, the process of arriving at agreement among actors with varying interests and influence. Without understanding these political dynamics, we believe realistic solutions or re-designs of social systems cannot be achieved.

To analyse these political dynamics, the laboratory adopts the empirical approach and conceptual tools of comparative institutionalism in political science. This approach focuses on how various political institutions (such as electoral, executive, local government, and bureaucratic systems) shape and constrain the behaviour of political actors and influence the outcome of political contestation. By understanding how these “rules of the game” affect collective decision-making, the comparative institutionalist hopes to generate predictive theories to be able to better engineer political systems. CPSL covers political institutions and processes in general, but focuses particularly on the domain of local government and autonomy as well as decentralisation and federalization. My current research interest concerns the role of party organizations and systems in local governance.

This laboratory was established only in April of 2011, but currently consists of five seminar students and two external researchers. The students’ themes cover a wide range of topics which include: the designing of local electoral campaign pamphlets; policy-formation process in local governments; local community strategies to attract foreign tourists; and immigration policy in France and Japan. The laboratory centres around instructing students on the basics of social science and methods of comparative analysis while guiding them on their particular research themes. Early in the term, books of interest from related fields are recommended, read and discussed among students.

As an extra-curricular activity for this laboratory, we conducted a “walk and think tour” last semester in honour of peripatetic philosophers of history starting from Aristotle. Beginning in Yokohama harbour, we stretched our legs and cooled our heads for a day’s trek to the new Skytree tower in Sumida ward. We hope to continue such outings to spark ideas and insights outside of the normal research environment.