Laboratory Profile

Introducing two labs directed by Professor Taketoshi Hibiya

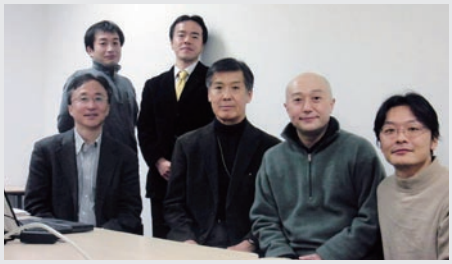
Professor Taketoshi Hibiya

Research Fellow at NEC's Fundamental Research Laboratories, Professor at Graduate School of System Design, Tokyo Metropolitan University before accepting his current position
Major: Large scale systems engineering

Semiconductor Technology Laboratory

Director:
Professor Taketoshi Hibiya

Members:
Professor Shinichiro Haruyama, Associate professor Keio Shimazu, Jun Kato (doctoral course), Kenichi Seki (doctoral course), Yasuhiro Miyake (doctoral course), Shintaro Murakami (doctoral course), Hung-Chi Hsiao (doctoral course), Hideki Urabe (doctoral course), Eiichiro Moriya (doctoral course), Yutaka Yoshioka (master course), Sadao Suganuma (former executive director of Oki Engineering)



Lab members

Lab meeting

This one word, "semiconductor", means various things to various people. Semiconductors are closely tied to resources, material and property physics, production process, electronic components, LSI chips, embedded software, and digital equipment, each of which has been developed in depth and become highly segmented. In SDM, there were students who specialized in one of these areas but had no contact with other semiconductor products. This lab was established to facilitate collaboration on semiconductors for which the entire picture is not visible from one position, but can be captured from multiple viewpoints, such as management and engineering. People with different backgrounds, such as production engineering management, analog circuit design, System LSI design, testing equipment development, marketing, software development, and research on censors come together to present their ideas, get feedback, and fine-tune their applications.

We are mainly working on two research activities; analysis from a business viewpoint and development projects. Firstly, the semiconductor industry is one of the most important industries in Japan; semiconductor devices are considered to be "rice in industry." This will continue to be very important in terms of business as well as technology. However, the US, Korea, China and Taiwan are cutting into Japan's strong position. It is inevitable that we apply optimal strategies in this changing business environment. We analyze industry trends from various points of view. "Foundry business" that handles "high-mix low-volume production" and "outsourcing of production systems" are keywords. Members of this lab have extensive semiconductor industry experience and are enthusiastic about their work.

Secondly, although discussions tend to concern business matters, manufacturing is also a popular topic especially among technology-oriented members. In 2010, we developed an application for mobile phones and entered it in the Mobile Application Contest hosted by Tokyo Institute of Technology. Having people from different industries develop the application revealed new points of view. Next year, we will create a MEMS (Micro-Electro-Mechanical Systems), device using a semiconductor micro-processing technology.

We welcome those of you who are interested in our lab. Please feel free to contact a member. Some members had no knowledge of semiconductor industry until they joined us.

(Yutaka Yoshioka-second year masters course)

SSES Lab: Strategic Social Education System Lab

Director:
Professor Taketoshi Hibiya

Members:
Professor Takashi Maeno, Professor Kenichi Takano, Sachio Muraoka (doctoral course), Jun Kawai (masters course) and two other outside researchers.

Official site (Japanese) ▶ http://lab.sdm.keio.ac.jp/sses/

Lab Members

SSES Shakaijin Kisoryoku・Certificate

The Strategic Social Education System Laboratory (SSES Lab) was established in April 2010 to create a training program for people who can contribute to society from a young age. On November 29, 2010, the "self-sustained action" training program that they developed and tested won the Incentive Award at the Shakaijin Kisoryoku (basic business skills) Grand Prix hosted by the Ministry of Economy, Trade, and Industry.

The SSES Lab has found that many companies need excellent employees who can contribute in the early stages and developed a "self-sustained action" training program to train the ability to think, set targets, plan and act, which is the most fundamental but also the most important.

Its advantage was proven ten young SDM student examinees in a four-month demonstration test that began in May. In the test, the examinees tried to get a quick view of their own current state and design and manage themselves with the system engineering methods that they acquired in lectures and through ALPS. And Mentors (mainly working students) asked questions, helped them to find solutions to their problems, and provided moral support as the students refined their goals and worked toward them. By trying to improve their actions based on the PDCA Plan-Do-Check-Action Cycle, students can flexibly tackle various barriers and continuously develop themselves. This program features the mechanism in which Mentors encourage student examinees' development.

This program will enable students not only to achieve fruitful results in their student life and research, but also to appeal themselves in a positive manner in job interviews. With this training, we believe that they will contribute to the society.

The current outlook for job hunters is worsening and finding a suitable job, or finding training for a suitable job, is becoming more difficult, which is likely to be a drain on Japan's social vitality. The SSES Lab continues to conduct research on the win-win utilization of people (including training and recruiting for industry, students and universities) to create more efficient and effective training programs, and to propose practical and proven solutions by applying the results to Japan's education systems and recruiting systems.

(Jun Kawai-second year masters course)

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SDM
System Design and Management