

ELyT School in Sendai 2012

The International Associated Laboratory ELyT-lab was created in 2008. It has contributed to the promotion of scientific collaboration between laboratories in Lyon and Tohoku University. This has culminated in scientific projects, publications, workshops, and joint PhD thesis. In parallel with these activities the ELyT lab wanted, from the very beginning, to add a significant educational component to its field of action, with help from academic exchange programs, such as Master level double degrees from Tohoku University and INSA Lyon or the Ecole Centrale de Lyon (ECL). One of the keys to developing a long-term partnership between France and Japan is to attract students and convince them to spend long periods in the partner country (2 years for the Master double degree, and 1.5 / 3 years for a doctoral thesis). Typically, students start off with no prior knowledge of the country. For this reason, it was decided to expand the collaboration within ELyT-Lab between Lyon and Tohoku, to the organisation of short-term scientific schools dedicated to engineering and PhD students. The project aims to provide an opportunity for young Japanese and French students to take part in the scientific activities of the ELyT-Lab, but also to have a first contact with the partner country.

"ELyT School" is held alternately in Japan and France with the support of the founding institutions of ELyT Lab, as well as the Rhone Alps region, the Greater Lyon urban community, the Ministry of Higher Education and Research in France, and the Global Centers of Excellence of the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) and the city of Sendai in Japan. The first three schools, held in September 2009 and 2011 in Lyon, and in October 2010 in Sendai, were very successful. Each time a group of up to thirty students, accompanied by some faculty members, go to the partner country for ten days.



ELyT School in Sendai 2012

The fourth edition of the ELYT School was held from the 4th to the 15th of September 2012 in Sendai with the visit of 24 students (10 PhD and 14 Master students) accompanied by four professors from the original partners of ELYT School, INSA Lyon and EC Lyon, as well as 5 PhD candidates from other partners in China and France. These students came from disciplines such as mechanics, physics, materials, geology, biomedicine, aerospace, environment, and electronics. For most of them, it was their first experience in Asia and Japan. In addition to the French and Chinese students, seven students from the home institution Tohoku University were selected to participate in ELYT School. This greatly enhanced the interaction between students from both countries during the 10 days. In addition to participating in the programme, the students from Sendai helped with the logistics of organising the school. They will be future ambassadors for ELYT School, and are highly motivated to participate in academic exchange programmes as well as future editions of the programme.

This programme of 10 days was devoted to both scientific and cultural aspects, including also the participation of some of the laboratories on the campus. Most of ELYT School was based on presentations made by French or Japanese professors (8 in total). Their themes were chosen in order to cover the broad spectrum of origin of the students. For example, Professors Maruyama and Takagi gave lectures to better understand the 2011 tsunami, and Professor Sato gave a lecture about Japanese culture.



Scientific lecture at Katahira Campus

The students visited some of the laboratories involved in ELYT-Lab at Katahira and Aobayama Campus. It was an opportunity, in addition to seeing some experiments and discussing specific themes with Japanese PhD students, to discover the organisation of the life in a Japanese laboratory, very different from what it is like in France. Also, during 2 days, ELYT School was organised in parallel with the “International Innovation Workshop on Off

Shore Tsunami Energy Dissipation and Peak Height Alleviation". This collaboration opened the door for the students to participate in a prestigious international conference. The students were very impressed by the interdisciplinarity of the researchers that were present, and they had the opportunity to discover the different aspects of the professor profession.

A visit to the Sendai Thermal Power Station & Sendai Solar Power Station in Matsushima bay, one of the most damaged areas by the March 11th earthquake and tsunami was organised in order to learn about the functioning of the site and observe the incredible restoration work that has been carried out. The visit lasted half a day, and consisted of presentations and visits, accompanied by several of the plant's workers, who willingly and with great hospitality showed the students around the site. After the visit, the student held one minute's silence together with the factory workers at a tsunami memorial site.



Visit to the Sendai Thermal Power Station

This excursion to the site was coupled with sightseeing by boat and foot in Matsushima bay, a group of islands in the Miyagi Prefecture and one of the "Three Views of Japan".

A substantial social program was set up, with the assistance of students from the home institution. They organised a great barbecue by the river for the visiting students, where they could taste "Imo-ni" - a potato and meat soup eaten traditionally in the autumn in the Tohoku region of Japan. Students also visited Hiraizumi, a very important city during the Heian era, and whose historic monuments and sites achieved UNESCO World Heritage Site status in 2011. The highlight of the visit was the "Golden Hall" of the "Chūson-ji" temple. To deepen the students' understanding about Japanese culture an afternoon was dedicated to a cultural lesson about the traditional Japanese tea ceremony. Another very popular aspect was that they got to taste the great variety of Japanese cuisine throughout the programme. In addition, the contact established between the Japanese and the French students lead to several activities that were not initially planned, like a trip to a jazz festival and a night out to try karaoke.



Barbecue organised by students from Tohoku University

Evaluation/assessment:

Many students expressed and revealed a real desire to participate later on in the various programmes: double degree, academic exchange, joint thesis...

The ElyT School can be a very good way to attract PhD students for the future, and strengthen the special bond that has been built between Sendai and Lyon. Such short thematic programmes, beyond the synergy they create between education and research, may also contribute to give a lift to Japanese student mobility, still at an early stage.

The originality of the project lies in the synergy of four key factors:

- A comprehensive and durable relationship with a partner, essential for collaborations across borders
- An adapted response to the complex issue of Japanese student mobility, integrated into a very active research collaboration
- A programme that integrates the triptych education / research / industry
- A mutual concept (one year in France, one year in Japan)

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