

IDEA League Summer School  
(ETH Zurich)  
Student reports (2019)

# IDEA League Summer School- ETH Zurich, 2019

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## 1. Preparations before departure

For me, it costed a lot of time to prepare for the journey, including luggage, insurance, visa, Internet connection in Switzerland and itinerary. Because it was my first time to visit Switzerland, I searched on the Internet to make a list and asked for advice from the student who participated the same program last year. And it has been proven that with more preparations, it would be easier to stay abroad. For example, supermarkets in Zurich are located densely on the center district and almost every shop is closed before 6 pm, when the sun is still glowing on the sky. Considering the much higher price of any services and commodities, if prepared well, less problems could be avoided.

## 2. Arrival of Zurich

It was well organized by ETH Zurich that all the information about the program was disclosed for us. Below was the schedule and details of events, meeting point were sent to us on former Friday before program week.

July 2019	Monday 15 <sup>th</sup>	Tuesday 16 <sup>th</sup>	Wednesday 17 <sup>th</sup>	Thursday 18 <sup>th</sup>	Friday 19 <sup>th</sup>
10-13		History of scientific Infrastructures - <i>Sciences and the Internet</i>	Excursion and ETH LabWalks	Workshop <i>Open Science</i>	Presentations of group work and final discussion
14-16	Arrival at ETH Zürich or at Seminarhotel Lihn, Filzbach	- <i>The Politics of Computing Centers</i>	Free afternoon in Zürich	Workshop <i>Reproducibility</i>	
16-18	Welcome			Group work	
19	Dinner	Dinner		Gala Dinner	

Organizers led us to the venue of program, a seminar hotel in Filzbach. Even though we were guided across the convenient Swiss public transport, it was indispensable to set down the full name of station and which station to transit.



Sunset view from the seminar hotel, Filzbach

A friendly and relaxed atmosphere was created in the welcome party and following activities organized by us students. Thanks to the late sunset time in Swiss around 10p.m., we had abundant time to trip around and enjoy the landscape in Filzbach.



First day in Filzbach

### 3. Lectures in the program

Lectures included as following,

- Daniela Zetti: Networks;
- David Gugerli, Ricky Wichum: The Policy of Computing Centers;
- Gabriele Gramelsberger: A Global Modelling Infrastructure of Climate Science;

- Andreas Kaminski: Data Reproducibility in Climate Science;
- Catharina Landström: Participatory Modelling in Water Risk Management;
- Dawid Kasproicz: Infrastructure for Collaborative Coding.



Given by lectures from various backgrounds in ETH Zurich and RWTH, it was a challenge for us to understand the basic concepts of different fields in a short span of time, along with the application and utilization of infrastructures in their research. Besides, instead of teaching us how to use them, they talked more on what the infrastructures are, dating from the history of them, and how they would develop further in decades of years.

Since I started learning engineering, I have never recognized the philosophy aspects of science and technology. What I was taught was how to operate on them and how to realize something by this method. We treated them as a tool, making use of their benefits in daily research, but ignored their origin and how they were given birth in the world. Without such recognition, I would never imagine what infrastructures would become in the future. Thanks to the lectures, I learnt that they were not only maintaining our world but also creating something brand-new as an invisible promoter.

#### **4. Outgoings in ETH Zurich campus and city of Zurich**

Four groups were divided for labwalks, including robotics, environmental sciences, digital curation and civil engineering. In campus of Hönggerberg, my group visited the department of civil engineering and learned how they adopted deep learning in scientific research work and future prediction in industrial production.



City tour in a group



Group boat trip over Lake Zurich

Guided by organizers, we enjoyed a good time in the city of Zurich. The excursion supported by the free pass in Zurich zone enabled us to have a sight on lake Zurich, feeling the classic-modern combination of the city.

## 5. Final Presentation



Our groups visualization

The program ended up with the group presentation on the topic named, visualization of science and infrastructures. Students from different background took on their own understandings of the relationship. It was a fantastic experience to converge ideas and co-work with European students.

## 6. Conclusion



All the staffs and students

Even though nearly every student has completely different major and research on subjects with none of link between each other. We gathered here to share our opinions on something widely existing in our research and our life. From the contents of the program, I acquired a broad spectrum of knowledge within condensed period and witnessed how it displays in institutions, which will act practically in my future work in the field of science and technology. What's more, outside the arrangements, we had abundant time to talk with each other, exchanging our opinions in scientific discovery and advancement, sharing our experience living in different countries, hearing advice from the seniors on our career and personal development. Also, the daily hiking and walking physically practiced me a lot. Finally, I would like to appreciate Tokyo Tech offering me the precious opportunity to experience in such an inspiring overseas program and always supporting my participation during the whole process.

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Figure 1. The view of from the seminar hotel

On September 2nd – 7th, 2018, I had an opportunity to join a summer school program organized by IDEA League - ETH-Zurich and was held at Seminar hotel Lihn in Filzbach- Switzerland. This accommodation is located 75 km from Zurich, which was quite a location with a beautiful view of the lake and mountains that made all participants more focus and relax. During a week of the program, the host university provides good meals as

wells. By reading all documents, I could get the overview of the summer school content and prepare some questions that I would like to ask during the program. This preparation helped me so much, so when I was in the class I could follow what the keynote speakers talking about.

Since this program was initiated by IDEA league, a consortium comprised TU Delft-ETH Zurich- RWTH Aachen - Chalmers University - Politenico di Milano, therefore most of the participants are the student from member European universities. Some students outside from IDEA league member list also participated in this program, such as Oxford University, Cornell University, Tokyo Institute of Technology, Hong Kong University of Science and Technology, Tsinghua University, Korea Advance Institute of Science and Technology, and Nanyang Technological University that made this program more diverse.



Figure 2. All participants of IDEA league - ETH Zurich summer school 2018

The program covers a series of topics related to environmental footprint, such as measurement of environmental footprints, green economy initiatives, the relation between trade and the environment, changing paradigms of green business, and pro-environmental behavior. All the participants were divided into groups, and at the end of the program each group needed to present their own group work.

### **Preparation before the Summer School**

At first, I found the information about this program from a leaflet in Campus and the topic of the summer school gained my interest to apply. I had interest in this summer school because by participating in this program will give me a valuable opportunity for making new networks with many scholars and broadening the horizon of my knowledge of environmental footprint from various disciplines primarily related to the strategies from all stakeholders for reducing the environmental burdens. Also, the topic of this program is related to my current research interest which focusing on food, agriculture, and poverty issues. Since, food is also one of the significant environmental footprint drivers due to changes in the diet, growing population, global trades, and economic development. Therefore, the importance of food sustainability has become a critical issue in societies because the environment supports people's lives in providing food and is therefore vital for human well-being.

During the screening process, I collected the materials about the program theme, so I had enough preparation during the interview. After that, I was selected as one of the students represent Tokyo Tech in that program. Prior to my departure, I booked the flight ticket and prepared some documents such as visa, travel insurance, and internal document for the university. I had to arrange my flight to Zurich before visa application. As for the visa, the process is quite easy and I got the visa within 1 week after the submission. Regarding, the internal documents and travel insurance documents preparation I really appreciate the support from Ms. Sai and colleagues.

### **Cost of Study Abroad**

We got support stipend from Tokyo Tech ¥ 80,000, and the rest of the expenses such as insurance and visa application fee are covered by our budget. In this program, the accommodation such as hotel and transportation from airport to the venue were covered by local host university.

### Activities during the program

All participants were arrived 2<sup>nd</sup> of September and had dinner together at the seminar hotel Lihn. The class were started on September 3, and below is the program outline.

Day 1 (Sept 3)	Day 2 (Sept 4)	Day 3 (Sept 5)	Day 4 (Sept 6)	Day 5 (Sept 7)
9:00 – 9:30  Thomas Bernauer: Welcome and Introduction to the topic of summer school	9:00 – 12:00  Stefan and Bernhard Wehrli: Nuts and bolts of LCA and Measurement of EF	9:00 -11:00  David Bresch: how do firms and industries consider and manage environmental risk	9:00 – 10:30  Thomas Bernauer: Measuring and explaining environmental attitudes and behavior of consumer and citizens	9:00 – 9:30  <b>Group presentation and closing of the program</b>
9:30 -12:00  Mathis Wackernagel: Measuring and assessing environmental footprints	13:30 -16:00  Thomas Bernauer: Linkages between international trade and the environment	11:00 -14:30, 14:30 -16:00  Joachim Scholderer: Corporate environment strategies  Bjarne Steffen: Insights from the energy sector	10:30 -12:30  Linda Steg : What can be done to encourage pro-environmental behavior	
14:00 – 17:00  Sibyl Anwander: Green economy initiatives	16:00 – 18:00  Group work facilitated by ISTP doctoral student	16:00 – 18:00  Group work facilitated by ISTP doctoral student	13:30 – 19:00  Group work facilitated by ISTP doctoral student	

In the class, they encourage all participants to be actively answered and discuss some problems that given by each lecturer. I really enjoyed this session so much, because we were able to brainstorm our opinion and came up with some answers that based on each people background and knowledge. Sometimes we still continue to discussed and share our thoughts during lunch or coffee break. Moreover, in some sessions, I could explain about what was the current environmental policies situation both in Indonesia and Japan.



Figure 3. Problem solving discussion



Figure 4. Lunch Break

For the group project, each group should choose one interest case that has been provided by the program, and my group chooses a topic that related to NGO. In this project, we played the role as a politically active NGO based in an European country. Two of our organization's most important goals are the reduction of poverty and at the same time environmental conservation. It is a priori unclear under what conditions these goals are substitutes or complements. In particular, it is unclear how large European companies with operations in developing countries (e.g. extractive industry) influence that dichotomy. Develop a strategy for your NGO's political activity which would deploy our resources in a way that would aim to make the two goals complementary.



Figure 5. Group Work



Figure 6. Group Presentation

On the last day of the program, my group presented our project. We conclude that poverty alleviation and environmental conservation should not substitute each other but indeed should coexist. There are some pathways to alleviate the poverty issue such as rural electrification, food security, clean water, health and diseases, and education. Since people who live under the poverty in rural area are usually very dependent on natural resource in daily life, i.e. 50-89% of their income comes from nature ecosystem, therefore we proposed some strategies that can make both poverty alleviation and environmental conservation coexist especially in rural area cases, such as ownership and operation of natural resource by local community and a project that can allow those people get direct cashflow immediately, and trained and encourage the poor to do a local green business entrepreneur. In order to attain the project goal, quantitative indicator of poverty (e.g. income), and environmental condition (e.g. Eco-footprint or level of indoor air pollution) measured before, during, and after project. The time frame of the project should clearly define in the beginning and external influences effect (e.g. a country economic or political condition) which we cannot control should also take into consideration in the evaluation matrix.

## **Conclusion**

Since my research topic about food and poverty issue, therefore I did not find any difficulties to connected between summer school topic and my research. This kind of program allowed all participant to explore and share their knowledge with the opportunity to stimulate a new way approach to solve a problem and learn from each other. Even though the duration of this summer school is very limited, I could expand the horizon of my knowledge especially from the political point of view of environmental policies. Through this summer school, I had an opportunity to meet and connect with excellent students from different countries, intercultural experience, an opportunity to work with scholars from different disciplines and backgrounds.

All in all, I would like to say that this kind of program will challenge us to be more confident in an international forum, actively speak up, and listen to other people point of view. This experience provides us with a different perspective and gains new inspirations directly and indirectly to our research and career in the future. I hope in the upcoming event, more students from Tokodai will apply for this opportunity.

**① Description of your study abroad destination (including the name of the program in which you participated and the institution that hosted you and program schedule.)**

Summer school was held in Seminarhotel Lihn in Filzbach, Switzerland by ETH Zürich with topic "Assessing and Reducing Society's Environmental Footprint" from 2-7 September.

- Day 0, 2 Sept 2018: Arrival of participants and dinner together
- Day 1, 3 Sept 2018, starting at 9:00: Measuring and assessing environmental footprints
- Day 2, 4 Sept 2018: Policy challenges
- Day 3, 5 Sept 2018: Firms and Industries
- Day 4, 6 Sept 2018: Consumers and citizens
- Day 5, 7 Sept 2018, ending at 13:00: Presentation of student project results

The detailed schedule is on different paper.

**② Preparations before your study abroad**

This could include explanation of the method(s) you used to collect information about your study abroad, any preparatory language study or research you did, how you obtained a visa, how you searched for a place to live overseas, etc. If you were affiliated with a lab overseas, please mention any preparations or communications you made regarding your overseas research advisor.

I found about this program information from Tokyo tech website because I wanted to study abroad. I was interested in this summer school because of the theme. My research is related to energy and environment and in the future, I also planning to do my research for better environment. To reach my purpose, I need to understand the environment exact problem and the countermeasure which is possible to be conducted.

This summer school was mainly about environmental footprints and problems from industry, politic and economy point of view. The host university gave us readings before the summer school was held to give us understanding about the topic which would be discussed. My major is engineering and is not related to politic and economy, thus it was quite hard to understand all the topics. But, thanks to the readings I could understand better about the topics before the summer school.

I obtained the visa by applying directly to Switzerland embassy and can be obtained smoothly because I also presented invitation from ETH Zürich which I requested after the announcement of participation result from ETH Zürich. The visa was sent to my address 2 weeks after applying.

Staying place and food was provided by host university. We only needed to state if we have food allergy etc. For transportation, I should search the flight go and back by myself and transportation between airport to the event place. They provided the ticket voucher code for transportation from Zürich to Filzbach.

**③ Impressions of activities during your study abroad**

**Please describe your impressions of any special activities you did during your time abroad.**

The summer school was interesting and fun. I am happy to listen to inspirational speakers. The speakers were not only ordinary professors, but also person from government. I could have new friends from different backgrounds who had big enthusiasm in the program. The program also gave my new experience to have western-style lecture which more loose, fun and more interactive than eastern-style lecture. Before the program, I did not know about environmental footprints and problems from industry, politic and economy point of view. By participating in this program, I could broaden my knowledge.

The final presentation project was divided into groups and different topics. It was really interesting because every group had members from different university. In the group, I could exchange my opinion with others and also know the differences of culture and country situation. My group topic was “developing an intervention program to motivate households to reduce their environmental footprint, as to limit climate change from policy-maker point of view”. At first, I was afraid to state mt opinion and suggestion because in Japan there is only few discussions in the classes and most of the discussions are boring, but after I tried to speak up, I realized that discussion could be so much fun.

Unfortunately, the time outside lecture and discussion was too short. I did not have many times to interact with other students. Our time for interaction and exchanging our culture and mind only in the meal time.

**④ An episode in which you noticed personal growth since you completed the study abroad**

Since returning to campus, have you had any instances in which you experienced a sense of how much you had grown through your experiences interacting with students from other countries and studying, doing research or experiencing daily life abroad? Looking at the goals you set for yourself in participating in the study abroad program and considering your successes and difficulties abroad, please share the most memorable episode in which you felt a sense of personal growth.

As I stated in the point before, I learned many things beside academic in this program. I learned about interactive lecture which was more discussion-like, less sleepy and less boring. The group discussion improved my confidence to speak my opinion, my communication skill and realized that discussion could be so much fun. In this program, I got many new friends from various backgrounds.

**⑤ Cost of study abroad**

Transportation expenses, program participation fees, living expenses, rent or rooming fees, insurance, scholarships, etc.

Transport from Zürich to Filzbach and Fizbach to Zürich were provided by the host. I only needed to buy flight tickets. I bought the cheapest flight 2 months before departure using Thai airways for JPY 113,360. Meals and stay were also provided. For insurance, I applied for Plan D from AIG General Insurance Company,Ltd which informations are provided by Tokyo tech for 15 days (summer school and extended stay) and paid for JPY 7,868. I also paid for JPY 7,000 for visa application. Tokyo tech gave me stipend JPY 80,000.

**⑥ Your living arrangements during the study abroad**

Type of accommodation (dormitory, homestay, etc.), method of application, roommate(s), etc.

I stayed at Seminarhotel Lihn which was provided by the host. Roommates were arranged by the host.

**⑦ Language study during the study abroad**

For example, mention languages studied or used in daily or academic life. If you took TOEFL or another exam before the program, what was your score, and was your proficiency sufficient to participate in the program?

The program was held in English. My TOEIC score is 990. I also took TOEFL class. Regardless with my TOEIC score, sometimes I felt difficult to understand the lecture because the lecture topics were not my field and I am not a native speaker.

**⑧ Academic credits**

(No academic credits are available through the ASPIRE Programs. Please omit this section.)

**⑨ How you want to utilize the experience(s) from now on**

Even though I do not use my knowledge directly to my research, it is still important for my future. I understand environmental footprints and problems from industry, politic and economy point of view. So, when I am thinking to implement my “technical” research for society, I should consider from industry, politic and economy point of view.

**⑩ Any trouble or issues you faced abroad and how you solved the problem**

There was no trouble during study abroad.

**⑪ Any advice for students who wish to study abroad**

What I found from study abroad was not only academic things but also social, skill, culture etc. So, even though I stated that I find some difficulties to understand the topics regardless of my TOEIC score, I think it is good to challenge something new. You do not need to be afraid to try even though your language proficiency is not good. Sometimes we should go from our comfort zone to be success. I believe this experience will be really useful in the future.

**IDEA league Summer School**  
**“Assessing and Reducing Society’s Environmental Footprint”**  
**– ETH Zürich, 2-7 September 2018**

	Topic	Program
Day 0: 2 Sept 2018	Arrival of participants and dinner	Dinner at 19:00
Day 1: 3 Sept 2018	Measuring and assessing environmental footprints, Green Economy initiatives	<p>9:00-9:30: Thomas Bernauer: Welcome and introduction to the topic of the summer school</p> <p>9:30–10:30, and 10:45-12:00: Mathis Wackernagel: overview of the EF concept, global comparisons of countries and sectors, relevance of the EF concept for environmental policy-making</p> <p>10:30-10:45 Coffee pause</p> <p>12:00–12:30: Students form groups and discuss first ideas for a project, supported by ISTP doctoral students</p> <p>12:30–14:00: Lunch</p> <p>14:00–15:30, and 15:45-17:00: Sibyl Anwander: Green economy initiatives, insights from Switzerland</p> <p>15:30-15:45 Coffee pause</p> <p>19:00 Dinner</p>
Day 2: 4 Sept 2018	Measuring and assessing environmental footprints, linkages between international trade and the environment	<p>9:00–9:30 Mathis Wackernagel: overview of the EF concept, global comparisons of countries and sectors, relevance of the EF concept for environmental policy-making</p> <p>9:30-10:45, and 11:00-12:45: Stefan Pfister and Bernhard Wehrli: Nuts and bolts of Life Cycle Assessment and measurement of EF</p> <p>10:45-11:00 Coffee pause</p> <p>12:45–14:00: Lunch</p> <p>14:00-15:15, and 15:30-16:15: Thomas Bernauer: Linkages between international trade and the environment</p> <p>15:15-15:30 Coffee pause</p> <p>16:15–18:00: Students work in groups,</p>

		<p>supported by ISTP doctoral students</p> <p>19:00 Dinner</p>
<p>Day 3: 5 Sept 2018</p>	<p>Firms and industries</p>	<p>9:00–10:45: David Bresch: How do firms and industries consider and manage environmental risks?</p> <p>10:45-11:00 Coffe pause</p> <p>11:00–12:00, and</p> <p>13:30–14:30: Joachim Scholderer: Corporate environmental strategies</p> <p>12:00–13:30: Lunch</p> <p>14:30–16:00: Bjarne Steffen: Insights from the energy sector</p> <p>16:00-16:15 Coffee pause</p> <p>16:15–18:00: Students work in groups, supported by ISTP doctoral students</p> <p>19:00 Dinner</p>
<p>Day 4: 6 Sept 2018</p>	<p>Consumers and citizens</p>	<p>9:00–10:30: Thomas Bernauer: measuring and explaining environmental attitudes and behavior of consumers and citizens</p> <p>10:30-10:45 Coffee pause</p> <p>10:45-12:30: Linda Steg: What can be done to encourage proenvironmental behavior</p> <p>12:30–13:30: Lunch</p> <p>13:30–16:15, and 16:30-19:00: Students work in groups, supported by ISTP doctoral students</p> <p>16:15–16:30 Coffee pause</p> <p>19:00 Dinner</p>
<p>Day 5: 7 Sept 2018</p>	<p>Presentation of student projects</p>	<p>8:30–11:30: Students present their projects</p> <p>10:00-10:15 Coffee pause</p> <p>11:30-13:00: Wrap up–Summer School</p> <p>13:00-13:30: Lunch</p>

## Pictures



Lecture and discussion with Mathis Wackernagel



Walking after lecture



Lunch



Group work

