

FINAL REPORT FOR STINT TEACHING
SABBATICAL

UNIVERSITY OF TOKYO



FALL SEMESTER 2018

Nader Tajvidi
Mathematical Statistics
Lund Institute of Technology
Box 118 SE-22100
Lund, Sweden

January 21, 2019

1 Preparation and Planning

On Friday December 22, 2017 I received an e-mail from Christofer Carlsson, who was the program manager for STINT's Teaching Sabbatical program at the time, that my application for Teaching Sabbatical Fellowship was successful and I was offered to spend fall semester 2018 at the University of Tokyo (UTokyo). Although the application process had started about half a year earlier, receiving the message was the real starting point for a journey which I will try to summarize in this report.

I started to plan for my forthcoming trip almost immediately. The first step was to inform the head of Centre for Mathematical Sciences at Lund University, Gudrun Gudmundsdottir, about STINT's decision. Soon after the beginning of year 2018 I contacted Professor Jonathan R. Woodward and Keiko Matsui who were my academic and administrative contact persons at UTokyo, respectively. The main purpose of this initial contact was to introduce myself and establish a direct communication to obtain more information about what I needed to do ahead of the first planning trip to Tokyo.

The STINT's seminar on February 8 in Stockholm provided excellent information about many practical details which we needed to consider in our planning. The short talks given by the previous Teaching Sabbatical fellows were indeed extremely interesting and useful.

The next step was to decide the dates for the first planning trip to UTokyo. As it was correctly suggested at the STINT's seminar in Stockholm, it was important to make this trip as soon as possible in order to have enough time for further planning the activities which would be undertaken during the teaching sabbatical. This turned out to be rather difficult due to the fact that spring semester at UTokyo starts in April which meant that some faculty members were away in March. On the other hand, the 4th study period at Lund University (LU) was set to start in March 19 but after some discussions and rescheduling my teaching at LU, the dates for the planning trip were settled for March 13-20.

It is hard to overemphasize the importance of this first trip because it is the first opportunity to meet the faculty at the host university and discuss possible courses which might be of interest for the students at the host university. I was assigned to teach at the Graduate School of Arts and Sciences at Komaba campus of UTokyo in two programs which are entirely taught in English.

Programs in English at Komaba (PEAK) is the University of Tokyo's first undergraduate degree program conducted in a language other than Japanese and it started in the fall of 2012. According to the website of PEAK "the

program was launched with the intention to establish an international campus and nurture global citizens and to contribute to the diversification of the campus with cultural experiences and educational backgrounds as declared in the Announcement of the Action Scenario: FOREST 2015 (University of Tokyo, March 2010). In the same year the Graduate Program on Environmental Sciences (GPES) began accepting international students.”

In the planning trip, a few meetings with the faculty at the Graduate School of Arts and Sciences were held and the main outcome was that I would teach a junior level course on Probability Theory for second year students in PEAK and an advanced course on Statistical Modeling of Extreme Values for senior level students. The latter would also be open to PhD students in the other programs such as Machine Learning.

Although the main courses for my teaching were decided, many further details about the content and the schedule of the courses needed yet to be worked out. To facilitate this, upon returning to Lund from the planning trip, I created a home page for the courses where I uploaded the first drafts of the course syllabuses with details of number of lectures and what would be covered in each lecture. I sent the link to the home page to the PEAK faculty at UTokyo for feedback and suggestions for possible changes in the teaching plans.

This turned out to be a good initiative as it facilitated further discussions with the PEAK faculty regarding how the courses can be adjusted to fit in in the overall studies of the students at PEAK and GPES. As a matter of fact, and as a direct result of this, the first course on basics of probability theory was replaced by an intermediate course in Probability Theory since some faculty members suggested that the basics are covered in some of the courses they offer. I will elaborate more on this later in Section 4.

It should also be noted that, apart from planning for the academic activities, there are also a few other very important matters which need to be dealt with during the planning trip. This includes providing necessary documents to the International Research and Cooperation Office at UTokyo which will apply to the Regional Immigration Bureau for a so called “Certificate of Eligibility” for the applicant. This is a main requirement in order to apply for temporary residency in Japan. One also needs to plan and arrange the accommodation for oneself and the family for the upcoming stay in Japan. Although the visa application process is basically straight forward, it would be worthwhile to use the first trip to gain a general knowledge about the types, price levels and availability of the different accommodation alternatives for the upcoming sabbatical.

2 Tasks and Responsibilities

I arrived in Tokyo on September 1st. The first step was to arrange many practical matters such as office, e-mail account, setup computer and so on. The UTokyo Academic Affairs System (UTAS) is the main site which provides information about courses, syllabi, class cancellations and other tasks related to the administration of the courses. General information about my courses were already registered in the UTAS but I needed to upload specific information about teaching schedule, course material and computer assignments. UTAS is also the main interface for interaction with students and the setup is fairly different from what is used at Lund University.

The classes started in the last week of September and I was solely responsible for teaching in both courses.

3 Activities During the Semester

Apart from regular lectures, the other activities included weekly lunchtime discussions with PEAK faculty on different aspects of teaching. The discussion topics were varied and it included for instance how to motivate students to get more involved in courses, using modern technology such as e-learning in the classes, how to motivate students to get more involved in the courses, different forms of examinations and many other topics related to pedagogics and how teaching can be improved at UTokyo. In addition “Teaching and Learning Workshop for International Programme Faculty” were organized by Global Faculty Development (GFD). The workshop contained round table discussions with experienced international programme faculty which covered topics such as “Evaluation” and “Classroom dynamics” where different ideas were discussed by the faculty who are directly all involved in teaching at PEAK, GPES or other international programs.

The Center for Japanese Language Education at UTokyo provides an opportunity to learn Japanese for international students and foreign researchers. There are a variety of courses offered, so one can find a course that fits with one’s schedule and learning needs. I attended the first level course at the center which met three times a week for about 2 hours in each session.

I also participated at the Lund University’s Alumni meeting at the Swedish embassy in Japan on October 9. This was also a welcome reception for a conference on “Sustainable Social System and Technology for an Ageing Society” which was organized by MIRAI. This is a partnership organization between several Swedish and Japanese universities with the main aim of increasing collaboration between a wide range of research of common interest between

two countries.

4 Compare and Reflect on the Teaching Experience

It seems that there are some major differences in the education systems between Sweden and Japan. The following is a brief list of the most important aspects which I have observed during my visit to UTokyo. It should be emphasized that these are mainly my personal views based on my experiences during the teaching sabbatical but I also have had some discussions with other faculty members at UTokyo in this regard.

1. Undergraduate students are allowed to take up to 15 courses per semester. This is in stark contrast to the students at a comparable level in Sweden who usually take about 5-6 courses per semester. As many of the courses are also optional, it means that the PEAK and GPES programs at UTokyo offer a great number of courses in each semester. A side effect of this is that it is not unusual at all to see classes with very few students. Consequently, it seems reasonable to assume that the decision about which courses should be offered is not mainly based on economic considerations. This seems to be in contrast to general practice at many universities in Sweden where one can observe a general proclivity to base such decisions solely on number of students taking a course.
2. The faculty at UTokyo enjoy much more freedom and flexibility with regard to the design and syllabus of the courses they teach. In contrast, the Swedish system seems mainly geared toward writing detailed course plans which in turn need to be approved by several “education committees” at the university before they can be offered to the students.

It seems that the Japanese system has some clear advantages. It certainly makes it possible to introduce new courses at the university in a much more straight forward and uncomplicated manner than what the Swedish system permits. The downside seems to be that the contents of the courses are mainly dependent on the teachers who are in charge of them. As one of the professors at UTokyo pointed out to me, this provides a great flexibility which is actually considered a nice feature at the university. However, it can also happen that the content of one and the same course offered by different professors are fairly different.

Another consequence of this approach is that it seems to be difficult to know what can be assumed about the knowledge of students who have taken a course which is a prerequisite to an advanced course. As I raised this issue with one of the professors at the university, the answer was that the teachers ask students what topics were covered in the basic course and then modify the content of the advanced course accordingly. This requires a great amount of flexibility on the teachers' side in their planning of the courses. Alternatively, the teachers can provide information about what knowledge is assumed and it is the responsibility of the students to fill the gaps, if necessary.

3. The UTokyo puts great emphasis on improving education. The global faculty development initiative and the regular lunchtime meetings which were discussed in Section 3 are just two examples of how important the pedagogical improvements are for the university.

5 Important Lessons

The discussion in Section 4 outlines the most important lessons learned in this visit. The following is a summary of the most salient points:

1. It seems to be beneficial to the higher education if new courses could be introduced in a faster pace than what is possible now.
2. There is a need to consider other factors that “cost” or “number of students” to decide which courses are offered. There seems to be a great difference in the number of elective courses offered in the Swedish and Japanese universities.
3. There is a need to take a more systematic approach to pedagogical improvements in higher education in Sweden. In my opinion, this is far from the case and although course evaluations are carried out regularly in most course at the universities, it is very seldom the case that positive feedback from students lead to any formal or informal acknowledgement of teachers' efforts in the concerned courses.

6 Action Plan

I have discussed possibilities for collaboration with some faculty at Graduate School of Mathematical Sciences. There have also been several meetings with PEAK faculty on possibilities for future collaboration. In particular, detailed

discussions have been carried out to explore the possibility of collaboration on research of common interest such as climate change and air pollution. Yet another possibility is collaboration with other universities in MIRAI.

7 Summary and Conclusions

I think STINT's Teaching Sabbatical program provides unique opportunities for teachers to get directly involved in teaching and see the host university from within. One can gain a much deeper understanding of how a highly ranked university such as UTokyo functions in a way that it would not be possible as a visiting professor for research collaboration. However, it should be noted that carrying out a successful teaching at a university with completely different education system requires enormous amount of planning even before the teaching sabbatical formally starts.

8 Acknowledgements

First of all, I would like to thank STINT for providing this opportunity to spend one full semester at UTokyo. Specifically, Dr. Hans Pohl, Karin Forslund and Christofer Carlsson have been very helpful and supportive during the whole process. I am also grateful to former head of Center for Mathematical Science at Lund University, Gudrun Gudmundsdottir, for her guidance and support from the first time I contacted her regarding the Teaching Sabbatical Fellowship until my application was sent to the university and then to STINT. Her support has been truly invaluable.

I would also like to express my gratitude to faculty and staff at UTokyo. Professor Jonathan R. Woodward and Professor Fusako Beuckmann have been extremely helpful with all aspects of my teaching at UTokyo. Akiko Takao and Keiko Matsui from International Research and Cooperation Office at UTokyo have been very patient in answering all my questions regarding visa application, accommodation in Tokyo and many other related matters.

Last but not least I would like to thank the staff at the administration of PEAK and Graduate School of Arts and Sciences who have helped me with all aspects of my life and teaching at UTokyo. In particular, I would like to express my heart-full thanks to Isako Tanaka, Yuko Imai and Ayako Izumi for all their support.

Of course the above list can be extended with many other names but for the brevity I would like to take this opportunity to thank all other faculty and staff at PEAK, GPES who have always been willing to provide their

views about anything which I had discussed with them. Thanks also to all teachers in the Japanese classes at UTokyo and the Center for Japanese Language Education for their efforts to teach us Japanese. You all have been wonderful!