

# Short visit trip to Japan

## Scientific report

This is a scientific report of a short visit of Martin Líška, a PhD. student of Faculty of Informatics at Masaryk University, to Japan in dates 2013/6/16 – 2013/6/25.

During my trip to Japan, I attended 10<sup>th</sup> run of NTCIR conference (<http://research.nii.ac.jp/ntcir/ntcir-10/>) in Tokyo aimed at evaluating information access systems. The conference consists of several tasks focused on different domains of information retrieval. For the first time, the conference hosted a task aimed at searching mathematics in documents – Math Task (<http://ntcir-math.nii.ac.jp>).

Our team from Masaryk University actively participated in this task with a math search system MIA<sub>S</sub> developed at our faculty (<https://mir.fi.muni.cz/mias/index.html>) along with four other teams from University of Berlin, Jacobs University in Bremen, University of Waterloo and home Nation Institute of Informatics team.

Similarly to TREC conference, participation in a task means performing activities already more than half a year before the actual conference. The activities are obtaining a test collection from the organizers, using an own solution to run the collection and obtain the results in a required format, submit the results, wait for the organizers to evaluate the results and transform the findings to a proceedings paper, meet up on a conference and share the experiences.

At the conference held in Tokyo I attended talks in EVIA 2013 workshop (<http://research.nii.ac.jp/ntcir/evia2013/>), both conference keynotes and all tasks overviews. In the session dedicated to Math Task I presented the approach and results of our team and subsequently discussed it in a poster session with other teams, organizers, program committee members as well as anyone interested. Poster is available for download at <https://dl.dropboxusercontent.com/u/21883748/2013-ntcir-poster.pdf>.

Our team achieved results which were above average of all the participating teams, additionally, one of the metrics from one of our submitted runs in one of the subtasks was the highest of all teams (Run #4 precision at rank 5 in Formula search type of Math Retrieval Subtask). Overall, the participation in this kind of meeting shown very useful for our future development and evaluation. The meetings brought together a community interested in math search which has a potential of growing, since several more teams from different domains shown their interest.

Math Task was a pilot task in NTCIR-10 and was approved to be held for the second time in NTCIR-11 in December 2014. This means future collaborations with the host institution. Except the future participation, our team will provide search logs from the real system where our math search is implemented (EuDML, <https://eudml.org/search>) to help the organizers to create topics for the NTCIR-11 Math Task test collection.

The participation in NTCIR-10 resulted in an on-line proceedings paper ([http://research.nii.ac.jp/ntcir/workshop/OnlineProceedings10/NTCIR/toc\\_ntcir.html](http://research.nii.ac.jp/ntcir/workshop/OnlineProceedings10/NTCIR/toc_ntcir.html)).

Following to the NTCIR-10 conference a first run of Assian Summer School in Information Access (ASSIA, <http://www.kc.tsukuba.ac.jp/assia2013/start>) was held in Tsukuba, organized mainly by

Hideo Joho, NTCIR program co-chair. Some of the world's best known names in IR were the lecturers of the summer school. My aim at the school was to learn about IR, its core as well as advanced topics.

The three-day school consisted of 9 lectures, 2 panels and a poster session. I attended the whole program with an own poster presented at the poster session (the same as in NTCIR) and actively participated in the live post-lectures discussions.

The summer school gave me a better knowledge about IR, its different aspects and domains which I will use on the domain of mathematics, especially its evaluation, which is my main research objective.

The whole visit to Japan was an incredible experience for me, visiting different culture and meeting other people interested in similar domain, discussing different IR topics and getting insights and different views on similar problems. It is a motivation for my future research.

As one of the 10 selected students attending the conference, I received a travel expense grant from the host organization NII. This covers my whole air ticket used for flight from Czech Republic to Japan and back, which was about 650€. There were additional travel expenses though. A reduction from the original amount from ELIAS grant is suspected.

Martin Líška