

IEEE Communications Society Distinguished Lecturer Tour Report

Lulea, Skellefteå, Uppsala, Stockholm and Sundsvall, Sweden

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DL: Prof. Xiaoming Fu (University of Göttingen, Germany)

Since I was honored to be appointed as an IEEE Communications Society Distinguished Lecturer starting early 2014, I had my first DL tour in Nanjing, Shanghai and Beijing, China during the spring of 2014. This year I had the opportunity for the second DLT, now in Sweden. The background was that recently I got involved in cross-university academic exchanges and several EU project proposals involving Swedish partners. In March I enquired the ComSoc about a DLT possibility in Sweden, as it seems I would have a bit time in August. Carol Cronin of IEEE ComSoc has been extremely helpful, kindly suggested me to speak with ComSoc Sweden Chapter, which I followed. Following Carol's suggestion I later filled a DLT form, successfully approved by Hanna Bogucka (ComSoc EAME Director), and Koichi Asatani (Chair of ComSoc MDSG Committee). The tour turned out to be well perceived by colleagues and students from and beyond these institutions.



Figure 1: Olov Schelén, Xiaoming Fu, Anders Lindgren, and Lara Lorna Jimenez introduced their respective research activities before the seminar at LTU

After my arrival to Sweden, I had some meetings with Uppsala colleagues during the first couple of days. Our ongoing collaborator, Dr. Farshid Hassani Bijarbooneh kindly picked me up in the train station upon my first arrival and sent me to the cozy apartment of the university housing (thanks for the DAAD U4 program which supports my stay in Uppsala), which became the primary base for my stay in Sweden. I flew to Lulea on 11th August and delivered the first lecture of my DLT at Luleå University of Technology (LTU), attended by several faculty members (including my current collaborator at SICS, Dr. Anders Lindgren, who is also adjunct associate professor at LTU), graduate students from the computer science division, as well as colleagues from Ericsson. The audience showed keen interests in the topic of SDN and ICN, and I enjoyed the interactions during the talk and in the Q&A period after the presentation. In

particular, one student discussed his master thesis topic and possible directions with me after the seminar, expressed about PhD position possibilities in Göttingen. I also had the chance shortly visited Ericsson Research Luleå, the second largest research unit of Ericsson worldwide according to our Ericsson colleague. My host Dr. Karl Andersson (IEEE Senior Member, Associate Professor of LTU) warmly invited to visit his main lab in LTU Skellefteå Campus, therefore I made the second tour to LTU Skellefteå.



Figure 2: Part of lecture audience (LTU Skellefteå).

Although belonging to the same university, the LTU Skellefteå campus is about 130 kilometers south to LTU main campus in Luleå, and the city is even located in another county in Sweden. Here I met an old friend Prof. Christer Ählund who visited Göttingen about 7 years ago and discussed a number of topics of mutual interests as well. Besides 6 LTU faculty members, several graduate students and 5 colleagues from Cisco were also attending my lecture. The industrial colleagues confirmed such a tag-alike approach would be a desirable solution for SDN management. Several PhD students also presented their research before my lecture and exchanged some experience. Interestingly, LTU Skellefteå colleagues created a close relationship with the nearby environments: a lab of Cisco, some SMEs, gas/electricity utility companies and the municipal governments. They have developed and deployed some wireless sensors and other ICT platforms coping with smart cities, smart living etc, and established a couple of EU sponsored projects. I was highly impressed and further cooperation options have been followed and pursued among us.



Figure 3: Karl Andersson, Christer Ählund, Xiaoming Fu, Robert Brännström (Head of LTU CS Division), Karan Mitra and Saguna, from left to right, at LTU Skellefteå, right after the Q&A

My next DLT lecture took place in Uppsala University on 13th August. In Uppsala I had the opportunity meeting colleagues that I had met (including Prof. Justin Pearson who works on constraint programming, Prof. Yi Wang who works on real-time and embedded systems), and those hadn't met before (e.g., Dr. Philipp Rümmer who works on model checking and software verification, Associate Professor Dr. Stefan Engblom who works on scientific computing, and Liang Dai who works on signal processing and control theory). My host Associate Professor Dr. Edith Ngai is the coordinator of several master programs in computer science at this large and first Swedish university of over 40,000 students as of today, and was very busy preparing the welcome week for the new entrants. She has recently started a new VINNOVA project on Internet of Things and we discussed several issues on mobile device-to-device communications, crowdsourcing and mobile cloud computing. The feedback to my talk was very helpful, as several master and PhD students attending the seminar are actively scouting for new problem space and are willing to cooperate with Edith and us when possible. As the new semester just started, I had also the opportunities traveling with 50+ new (and some old) students and several colleagues on a Saturday to the famous Lennakatten Vintage Railroad (Figure 4).



Figure 4: Unforgettable experience taking the ancient Uppsala steam train: stop over at Jernvägscafé in Marielund

As I had an EU proposal last year together with a colleague at Stockholm University, associate professor Dr. Harko Verhagen, whom unfortunately I had never met, I approached him for a visit there and eventually delivered my fourth DLT seminar at SU on 25th August 2015. Similar to my current administrative role in Göttingen as the international liaison for the department, Harko has made a lot of efforts to expand the collaboration scope for his large department of 300+ employees (including some 200 faculty member). From the Q&A I learned that there is an increasing interest at SU in social networks, especially with regards to security and privacy concerns. They also work with colleagues from social sciences and humanities (Harko himself had a master of sociology degree and his PhD thesis at the computer science department was on applying social science theories to multiagent systems building!). The SU department of computer science is surprisingly less than 5 minutes walking distance from one of our EU project partners, Swedish Institute of Computer Science (SICS), both in the Kista Science City of Stockholm (Figure 5). Due to time limit, I combined the trip to SU with SICS, and took the opportunity to speak with colleagues Dr. Fehmi Ben Abdesslem and Dr. Anders Lindgren, senior research scientists at SICS's Decisions, Networks and Analytics Laboratory. We have been collaborating on mobile cloud computing and Internet of Things.



Figure 5: Beautiful Kista Science City, Stockholm

My last DLT seminar was given on 27th August 2015, at a relatively new university, Mid Sweden University (MIUN), which was officially named a university 10 years ago. As its name suggests, the university is located right in the middle of Sweden, but in the east coast line, in a city called Sundsvall with 10,000 inhabitants. The university is growing, currently with some 18,000 students, and is also eligible to award PhD degrees since 2001. After three hours of high-speed train from Uppsala, my host Prof. Mikael Gidlund nicely picked me up in the train station along with his colleague Dr. Ulf Jennehag, and the city was excellent: clean, and spatial with many stony houses. The university is located near a river (Figure 6), with splendid view of the hill on one side and the river on another side, if one moves in different directions in the modern engineering building with glass-rich windows. Over 10 faculty members and 10 PhD students are working on the areas related to Internet of Things, including electronics, sensors, communications and networking, and data analytics. After my lecture, Dr. Stefan Forsström of MIUN presented their interesting work on IoT platform (partially released as open source in www.sensiblethings.se), a stream of IoT related efforts supported by EU Regional Development Funds, Swedish national agencies VINNOVA and Knowledge Foundation, and working closely with companies such as ABB, Telia, and a logistics company.



Figure 6: Mid Sweden University and its library

Thanks the generous support of IEEE ComSoc and also the hospitality of local hosts, I had a pleasant and fruitful DLT in Sweden. I enjoyed it very much and would like to visit Sweden again (and again)!