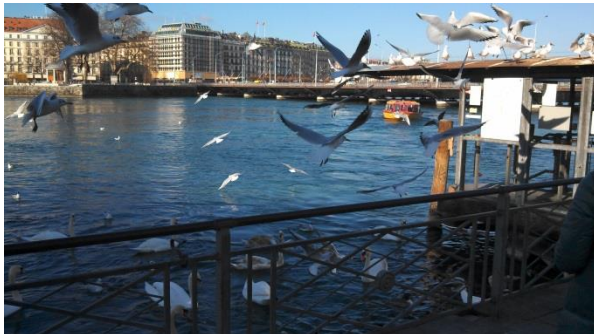


Excellent Graduate Schools program
“World Center of Education and Research for Trans-disciplinary Flow Dynamics”
2014 Internship Program Report

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| Name: | Mingzi ZHANG |
| Affiliation: | D1, Graduate School of Engineering, Tohoku University |
| Supervisor: | Assoc. Prof. Makoto OHTA |
| Internship Period: | Jan. 17, 2014 ~ Feb. 23, 2014(37 days) |
| Accepting Institute: | Centre Universitaire d'Informatique, Universitaire de Geneve |
| Accepting Supervisor: | Prof. Bastien CHOPARD |
| Research Topic: | Study on Cerebral Stent Strut Optimization utilizing LBM Technology |

It is my great honor to have this internship opportunity. Thanks for the funding assistance provided by the LEGS program and I am also grateful for the supports received from Prof. Ohta and Chopard.

Geneva is beautiful city which is famous for the Lake Lemman. The city is located at the west corner of Switzerland and bounded by France. There are a lot of official languages in Switzerland while in Geneva people speak French. There are lots of international organizations located in the beautiful city. The living expenses in Switzerland seems to be the highest in the world and is much higher even compared to Japan. Euro does not work there; instead, you have to use Swiss-Franc. Food there are generally cheese and the rice there is very much different from the one in Japan.



The little ferry in the Lemman Lake



The scenery in the Battelle Campus

My supervisor in University of Geneva is Prof. Bastien Chopard, who is a famous researcher in the field of Lattice Boltzmann method and paralleled computing. More than 100 academic papers have been published since he started his research career. In Professor Chopard's team, the majority of the fellows are post-docs. Few of the students are PhD and also there are many technical staffs who are now working there. The general impression I had the first day there is that his department's main job is doing research. The department of information is equipped with the great computing hardware, the Blue-Genie paralleled computing system. Besides, they also have other supercomputing systems like Scylla. Based on their team, the finest open source CFD software Palabos (utilizing LBM) was

constructed and maintained. The key members of this program Orestis Malaspinas and Jonas Latt are still working in Chopard's department which gives me a good chance to discuss with them.



The food in the cafeteria (15CHF)



The building of information center (left)



The entrance of my office there

During my stay, I had several discussions with Prof. Chopard on my research topic. He suggested me some ideas from their European Project Thrombosis of optimizing intracranial stents with cylindrical spirals, which becomes the method I am using right now.

The one month's internship experience is my precious treasure, not only in the aspect of academic research but also in understanding the world, which is going to help me with further progress in the future work. At last, thanks again to Prof. Ohta and LEGS program for giving me this opportunity and supporting me all the time.