

Report SIAM Uncertainty Quantification conference 2016

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The SIAM conference in Lausanne has definitely been a success. Counting around 800 people and an incredibly large number of talks, from the 5th to the 8th of April each day was full of consecutive seminars from early morning to evening. Top experts from all the world were actively participating, making the environment rich of knowledge and with great possibility of interaction. EPFL managed to administrate such a big conference perfectly and the schedule was faithfully followed.

On Monday, I had lunch with Fabio Nobile's group (host and main organizer of the conference), getting to know them and nicely interact with most of them. In the afternoon, we had an informal chat of our respective work with Martin Matthieu, PhD student in Fabio Nobile's group. Matthieu is trying to merge stochastic control and multilevel ideas, working both on theoretical and computational aspects. I expect to foster some collaborations in the future.

On Tuesday, the conference began. Beside the big seminars in the Auditorium, I personally attended all the talks from the mini-symposia *Large-Scale PDE-constrained Bayesian Inverse Problems*, parts I and II, organized by Aretha L. Teckentrup from Warwick group. In the afternoon, I attended another mini-symposium on *Sampling and Bayesian Inference*. Finally, I participated on a poster session about *Active subspaces* and I got to know its organizer, Paul Constantine (Colorado) and we hope to stay in touch with him.

On Wednesday, three mini-symposia on *Low Rank and Sparse Structure in Large-scale Bayesian Computation* had been organized from the MIT group in Uncertainty Quantification. This was really relevant for me, since it was strictly related with the mini-project that I am doing now with Robert Scheichl and with my future research. I also got to know the MIT group and its head, Youssef M. Marzouk. After some discussions, we realized it could be interesting for both if I could go and visit their group. This would be a great possibility of collaboration with one of the best group in this field nowadays.

On Thursday, my day was dedicated to three mini-symposia on *Advances in Sampling Methods for Bayesian Inverse Problems*, organized by very well known researchers in this field: Tan Bui-Thanh (Austin), Mark Girolami (Warwick), Youssef M. Marzouk (MIT) and Christoph Schwab (ETH). These were again very interesting and motivating, in particular the links with Riemann Manifolds and Information Geometry for MCMC, deeply connected with my mini-project.

Finally on Friday I have attended a mini-symposium about *Multi Level and Multi Index Sampling Methods and Applications* organized by Fabio Nobile (EPFL), Raul Tempone (KAUST) and Mike Giles (Oxford), and two mini-symposia on *Data Assimilation Techniques for High Dimensional and Nonlinear Problems*, organized by Gabriel Terejanu (South Carolina) and Haiyan Cheng (Willamette). I particularly enjoyed Multi Index seminars because I discovered that the idea is close to something that I am working on recently.