

# **Report of the XIX Summer School in Quito, Ecuador**

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The XIX Escuela Latinoamericana de Verano de Investigación Operativa (ELAVIO 2015) took place at the Escuela Politécnica Nacional from the 23<sup>rd</sup> to the 27<sup>th</sup> of February in Quito, Ecuador. After a selection process, 70 out of 100 applicants were chosen to attend the Summer School. The participants came from 15 different countries. Since the majority of the participants came from South-America respectively Spanish speaking countries, most of the presentations were given in Spanish and the slides were in English.

Every day the first presentation started at 9:30. After a short coffee break of 30 minutes, the program continued with the second presentation. We ate lunch at 13:00, and then we had the next talk at 14:30. After another coffee break, the last session ended at 18:00. Dinner was also prepared at the university.

The scientific program included 5 mini-courses, 2 plenary talks, one scientific exchange session and three technical sessions, which are organized in 5 parallel tracks. More specifically, the mini-courses

- Sparse optimization (Juan Carlos De los Reyes)
- Graph partitioning (Diego Recalde)
- Discrete quadratic optimization (Christoph Buchheim)
- Computational complexity vs. compact linear descriptions (Graciela Nasini) and
- Sustainable management and recovery of overexploited marine resources (Pedro Gajardo)

were arranged in 2 lectures with each lasting 90 minutes. Every mini-course gave me a good overview of the standard problems in the investigated research field and the state-of-the-art solution methods.

Two plenary talks

- Metaheurísticas para problemas de ruteo de vehículos (Irena Loiseau) and
- Models for ITS and Smart Cities (Jaume Barceló)

were planned as 90 minute talks and similar structured to the mini-courses. I was especially interested in the talk about Vehicle Routing Problems, since my Ph.D. is focusing on this topic.

1 hour and 30 minutes were scheduled for the scientific exchange session. Since no predetermined research area was given to discuss, everyone talked about their own research projects and exchanged their opinions.

Technical sessions were organized in 5 parallel tracks with usually 4 presentations (in total 54 talks). Some tracks only had 2 or 3 talks. Therefore, my suggestion would be to reduce the number of parallel tracks. I had the chance to present my current work with the title “Dealing with scarce optimization time in complex logistics optimization: A study on the biobjective Swap-Body Inventory Routing Problem”. This helped me to achieve further presentation skills. Also the discussion with the audience was very fruitful.

Additionally to the scientific program, a great social program was established. We saw the main sights of Quito via a bus tour (3 hours). For example the Presidential Palace, the Basilica or the “El Panecillo”,

a 45-metre-tall monument of a madonna. At Thursday some of us participated in a soccer championship.

The ELAVIO Summer School was a great event to share experiences in a fun and friendly environment and I am very thankful for this opportunity. I could present and discuss my research with other Ph.D. students as well as leading academics and got to know their research fields. Moreover, we exchanged ideas for possible future research projects and invited talks. Also we became friends during this time and want to stay in contact via the different channels, such as mail, twitter, facebook etc.

First of all, I am very grateful for my scholarship and want to thank the Association of European Operational Research Societies (EURO) and the International Federation of Operational Research Societies (IFORS), which gave me the opportunity to attend the Summer School. I also want to thank the organizing committee for their effort and their hospitality. They did a great job and made the ELAVIO Summer School a successful event.