

Report on a Short Visit to Geneva (CH)

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Thanks to the support received from the European Science Foundation (ESF) for the activity entitled “Random Geometry of Large Interacting Systems and Statistical Physics”, I have been able to visit Dr. Lorenz Gilch at “Section de Mathématiques” at University of Geneva.

The purpose of this visit was to continue a work in progress (“Branching Random Walks on Free Products”) with Lorenz Gilch (Université de Genève) and Sebastian Müller (Université de Provence–Marseille). Moreover, the plan was to complete a previous paper (“Phase Transitions for Random Walk Asymptotics on Free Products of Groups”) of Lorenz Gilch and myself.

During this short visit (from the 22nd to the 27th of November 2010), we were able to discuss a lot about the paper in progress and add some missing links to each individual part. Though it is not finished yet, it has been very useful for the three of us to work together, in order to make the work more homogeneous and readable.

This meeting was necessary, in order to improve the quality of the work, and to speed up the time of discussion, which the communication per email made inevitably long.

We also had the opportunity to start working on some new ideas, in order to reduce and simplify some proofs. Furthermore I had the opportunity to attend a talk by Sebastian Müller, about Branching Random Walks on Groups.

Moreover, Lorenz Gilch and I also made a lot of improvements in the previous paper “Phase Transitions for Random Walk Asymptotics on Free Products of Groups”, and made it ready for refereeing.

Lorenz Gilch and I are planning to continue collaborating in this subject, and therefore there will surely be some other exchange with him, in order to proceed with our work.

This visit was very productive, despite the short time available. Indeed it was possible for me to discuss about my work also with other people working at the Mathematical Department, in particular with Prof. Anders Karlsson.

During these discussions, some interesting questions arose. These could lead us to investigate some new problems, starting in this way a new cooperation. Therefore, although not planned yet, there could be a future collaboration with the University of Geneva.

On the paper “Phase Transitions for Random Walk Asymptotics on Free Products of Groups” (as well as on the one in progress “Branching Random Walks on Free Products of Groups”), there will appear an acknowledgement to the support received by the ESF.