

Report
Leibniz Fellowship: July 1st -July 31st 2009

Pierre Berger

During this position I gave two talks and assisted to three conferences.

The first conference was at University Paris 13 and about "Non Hyperbolic dynamics" following two approaches: C1 generic dynamics and cocycles. This was very interesting.

The second took place at the MFO. The level was high and the working conditions were great. It was an honor for me to give a talk there. I took benefit of many comments after this talk that I will mention later. Also thank to this talk I will probably start a collaboration with Kaloshin on a related subject.

The third conference took place at Imperial College in London. I give a talk there on the same paper improved following the previous comments. People told me it was understandable, and so it was a good advertising for this paper. Also everybody notice the not very common position that I had.

My talks were on the following paper already posted on arxiv:

<http://arxiv.org/abs/0903.1473>

The result generalizes Benedicks-Carleson theorem which is very important but understood by too few people (perhaps 10 in the world). Therefore the improvement of such a proof is very important and should lead to an article in one of the best journal. After my talk in MFO and while writing the paper for the proceeding of the conference (attached to this mail), I realized that my different proof could be improved by making the two last parts independent and the main concept (strong regularity) could be simplified. These two last parts are either purely analytic or purely combinatorial, while the two first parts are easy and classical. I attached the revision of the paper in progress to this report. I will not forget to send it to MFO as soon as it will be ready for a preprint.

The other work I did during my stay was the last corrections of a paper admitted in "Bulletin of the Brazilian Mathematical Society". The aim of this paper was to provide a modern version but also a development of the Hirsh-Pugh-Shub theory, which has never been rewritten since it appeared in the 70's. It is however the most cited article in dynamical systems. I mention my gratitude to MFO at the end of its introduction. The article is attached to this mail.

Thank you very much for the excellent working condition that you offered me. I appreciate especially the completeness of the library, the life conditions, and also the efficiency and the kindness of the secretaries.

Pierre Berger