



ABCDE



Scientific Report

First name / Family name

Alexander Lundervold

Nationality

Norway

Name of the *Host Organisation*

INRIA Bordeaux

First Name / family name
of the *Scientific Coordinator*

Pierre Del Moral

Period of the fellowship

01/05/2013 to 30/04/2014



I – SCIENTIFIC ACTIVITY DURING YOUR FELLOWSHIP

I did some work in the field of stochastic modelling together with my scientific coordinator. It hasn't lead to anything concrete in terms of publications.

I also worked together with collaborators from other institutions (in Clermont-Ferrand, Madrid and Bergen) on topics within combinatorics and algebra. Our work has led to two papers accepted for publication, and three drafts currently being written. One is almost at the submission stage.

II – PUBLICATION(S) DURING YOUR FELLOWSHIP

- Noncommutative Bell polynomials, quasideterminants and incidence Hopf algebras. With K. Ebrahimi-Fard and D. Manchon. To appear in IJAC, 2014.
- On post-Lie algebras, Lie—Butcher series and moving frames. With H. Munthe-Kaas. FoCM, Vol 14, Issue 4, 2013

Almost finished preprint:

- On the Lie-enveloping algebra of a post-Lie algebra. With K. Ebrahimi-Fard and H. Munthe-Kaas. Submitted shortly.

III – ATTENDED SEMINARS, WORKHOPS, CONFERENCES

- CEMRACS 2013 Summer School, Modelling and simulation of complex systems: stochastic and deterministic approaches, CIRM, Marseille, France, July 22—26, 2013
- SciCADE 2013, Valladolid, Spain, September 16—20, 2013
- School on Multiple Zeta Values, Multiple Polylogarithms and Quantum Field Theory, ICMAT, Madrid, Spain, October 7—11, 2013
- Workshop on Renormalisation from Quantum Field Theory to Random and Dynamical Systems, University of Potsdam, Germany, November 7—November 9, 2013
- Visit to Dominique Manchon, Laboratoire de Mathematiques, Université Blaise Pascal, Clermont-Ferrand, France, October 29—December 13, 2013
- Visit to Hans Munthe-Kaas, Matematisk institutt, Universitetet i Bergen, Norway, January 6—31, 2014
- Visit to Dominique Manchon, Laboratoire de Mathematiques, Université Blaise Pascal, Clermont-Ferrand, France, February 13—February 23, 2014
- Visit to the Research group in Free Probability, Fachrichtung Mathematik, Universität des Saarlandes, Saarbrücken, Germany, February 23—February 25, 2014
- Visit to Kuruşç Ebrahimi-Fard, ICMAT, Madrid, Spain, March 4—March 15, 2014
- Visit to IMUVA, Universidad de Valladolid, Valladolid, Spain, March 13, 2014



IV – RESEARCH EXCHANGE PROGRAMME (REP)

I didn't participate in the research exchange programme. I went on several scientific visits (as detailed above), but none of these were part of the program unfortunately (non-ERCIM institutions).

Together with my scientific coordinator I looked at opportunities for visits to ERCIM institutions, but none of the options were as good fits with my research as the institutions I ended up visiting.