



## Scientific Report

First name / Family name

Stefano Urbinati

Nationality

Italian

Name of the *Host Organisation*

PLERCIM (MIMUW)

First Name / family name  
of the *Scientific Coordinator*

Adrian Langer

Period of the fellowship

01/02/2013 to 31/05/2013



## I – SCIENTIFIC ACTIVITY DURING YOUR FELLOWSHIP

The period in Warsaw has been really intense. I gave several talks for the mathematics department. Three research talks about my work and two expository ones.

I have been discussing with several people in the department, but most of all Professors Langer and Wisniewski.

I have been following two classes for students (toric geometry by professor Wisniewski and Diophantine Geometry by professor Langer) and a research course (part of a series of lectures called SMUGA) organized by the IMPAN on Secant varieties.

One of the nice things of Warsaw is the good relation between the University and the IMPAN institute, the creates a stimulating environment and increase the possibilities to meet new mathematicians and discuss more problems.

## II – PUBLICATION(S) DURING YOUR FELLOWSHIP

Unfortunately I haven't had any publication in the four months but by now I have several work in progress that I hope will become publications soon. One of the work in progress (a collaboration with professor Boucksom) began thanks to the REP in Paris.

## III – ATTENDED SEMINARS, WORKHOPS, CONFERENCES

In the period in Warsaw I have been travelling to conferences a lot, and I had the chance to give several talks about my research.

I gave the following talks:

February 2013, Seminar on Algebraic Geometry, MIMUW, Warsaw, Poland.

March 2013, Oberseminar: Algebra, Zahlentheorie und algebraische Geometrie, Albert-Ludwigs-Universität, Freiburg, Germany.

March 2013, Seminar Algebraische Geometrie, Freie Universität, Berlin, Germany.

March 2013, Seminar on Algebraic Geometry, MIMUW, Warsaw, Poland.

March 2013, IMPANGA Seminar, Institute of Mathematics of the Polish Academy of Sciences, Warsaw, Poland.

March 2013, Seminari di Algebra e Geometria Algebrica, Dipartimento di Matematica dell'Università di Torino e Dipartimento di Scienze Matematiche del Politecnico di Torino, Torino, Italy.

April 2013, Séminaire de géométrie algébrique, Institut de Mathématiques de Jussieu, Paris, France.



May 2013, Seminar ANALYTIC AND ALGEBRAIC GEOMETRY, Institute of Mathematics of the Jagiellonian University, Kraków, Poland.

May 2013, Seminar on Geometry and Differential Equations, Instytut Matematyki Uniwersytet Pedagogiczny, Kraków, Poland.

May 2013, MEGA 2013 (Effective Methods in Algebraic Geometry), Goethe-Universität, Frankfurt, Germany.

And I have been to the following conferences:

Colloquium GRIFGA, *Groupement De Recherche Européen Italo-Français en Géométrie Algébrique*, Strasbourg, 4-6/03, 2013

Workshop: Characteristic  $p$  methods in Algebraic Geometry 2-5 April 2013. Imperial College (London, UK).

## IV – RESEARCH EXCHANGE PROGRAMME (REP)

For my REP I have been in Paris, Jussieu University.

My host has been professor Fabrice Rouillier of the INRIA, that has his office at the University. We had a very nice exchange of ideas of our different perspectives in working with algebraic geometry and he gave me things to read to be able to possibly start a collaboration in the future.

In the meanwhile, I have been chatting with professor Sebastien Boucksom.

During my stay I gave a talk at the official departmental seminar.