

# Curriculum Vitae

## Robin Guilbot

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### Current position

Post-doctorate at the Institute of Mathematics of the University of Warsaw, with fellowship of the project “Algebraic Geometry : Varieties and Structures” financed by the Polish National Science Center, from September 2015 to August 2017.

### Previous position

Post-doctorate at IMPA, Rio de Janeiro, with fellowship “Pós-Doutorado Junior” from CNPq, from September 2013 to August 2015.

### Education

2012 Ph.D from Université de Toulouse

Advisor : Marc Perret

Title : *Quelques aspects combinatoires et arithmétiques des variétés toriques complètes*

2008 Master 2 “Recherches Mathématiques Fondamentales”

2007 Mathematics teacher degree (Agrégation de Mathématiques).

### Papers

#### Articles

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- “Low degree hypersurfaces of projective toric varieties defined over  $C_1$  fields have a rational point”, under revision ([arxiv:1407.6945](https://arxiv.org/abs/1407.6945)).
- “Families of Calabi-Yau hypersurfaces in  $\mathbb{Q}$ -Fano toric varieties”, with M. Artebani and P. Comparin, to appear in Journal de Mathématiques Pures et Appliquées ([arxiv:1501.05681](https://arxiv.org/abs/1501.05681)).
- “The Toric Cone Theorem made explicit”, in preparation.
- “Toric Minimal Model Program without extremal rays”, in preparation.

## Other research activities

### Invited research talks

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- Jul. 2015 *Towards a unification of toric mirror constructions*, Seminário de Geometria Algébrica (UFF) - Niterói.
- June 2015 *On the unification of toric mirror constructions* (10 min.), ELGA II - Cabo Frio.
- May 2015 *Non projective complete toric varieties*, Seminario de Geometría Algebraica - Concepción.
- Nov.-Dec. 2014 *Variétés toriques complètes non projectives*,  
Séminaire d'Algèbre - Institut Camille Jordan, Lyon 1.  
Séminaire d'Algèbre et Géométries - Institut Fourier, Grenoble.
- Nov. 2014 *A transversal approach to the  $C1$  conjecture*, Rencontres du Groupe de Recherche GAGC (Géométrie Algébrique et Géométrie Complexe) - Centre International de Rencontres Mathématiques (CIRM), Luminy
- Sept.-Oct. 2014 *Une approche transversale de la conjecture  $C1$* ,  
Séminaire de Combinatoire et Théorie des Nombres - Institut Camille Jordan, Lyon 1.  
Séminaire de Géométrie Algébrique - Institut de Recherche MATHématique de Rennes.  
Séminaire de Théorie des Nombres - Laboratoire de Mathématiques Nicolas Oresme, Caen.  
Séminaire de Théorie des Nombres - Institut de Mathématiques de Jussieu, Paris 6.  
Séminaire de Géométrie Algébrique, Champs et Homotopie - Institut de Mathématiques de Toulouse.
- Jul. 2014 *Toric Minimal Model Program and application to arithmetics over quasi algebraically closed fields*, XXIII Escola de Álgebra - Maringá, Brésil.
- June 2014 *A toric approach to the  $C1$  conjecture*, XXVèmes Rencontres Arithmétiques de Caen - Ile de Tatihou.
- Apr. 2014 *Low degree hypersurfaces of projective toric varieties defined over a  $C1$  field have a rational point*, Seminário salomonico - Universidade Federal Fluminense, Niterói, Brésil.
- Sept. 2013 *What is a "low degree" hypersurface in a complete toric variety ?* Welcome talk - Instituto Nacional de Matemática Pura e Aplicada (IMPA), Rio de Janeiro.
- Jul. 2013 *Low degree hypersurfaces of complete toric varieties defined over  $C1$  fields have a rational point*, 28èmes Journées Arithmétiques - Grenoble.
- Apr. 2013 *Les hypersurfaces de petit degré d'une variété torique complète ont un point rationnel sur les corps quasi-algébriquement clos*, Séminaire d'Algèbre et Théorie des Nombres - Laboratoire de Mathématiques de Besançon.

May-June 2012 *Arithmétique dans des variétés toriques sur les corps  $C1$* ,  
 Colloque Jeunes Chercheurs en Théorie des Nombres - ENS Lyon.  
 Séminaire de Théorie des Nombres - Institut Fourier, Grenoble.  
 Séminaire d'Arithmétique - Laboratoire Paul Painlevé, Lille.

Mar. 2012 *Un critère d'existence de points rationnels pour un diviseur d'une variété torique sur les corps  $C1$* , Séminaire d'Arithmétique et Théorie de l'Information - Institut de Mathématiques de Luminy

### Other events attended

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Jan. 2016 CIMPA school "Toric Methods in Geometry, Arithmetic and Dynamics" - Santiago de Chile.

Sept. 2015 September Algebraic Geometry School "Cox Rings and Mori Dream Spaces" - Łukęcin.

Apr.-June 2015 Thematic program on Algebraic Geometry (4 encounters) - Rio de Janeiro.

June 2014 Géométrie Algébrique En Liberté (GAEL) XXII - Trieste.

Feb. 2014 Liberdade Em Geometria ALgébrica (LEGAL) 2014 - Teresópolis.

Jan. 2013 Rencontres du Groupe de Recherche GAGC - CIRM, Luminy, France.

June 2012 Géométrie Algébrique En Liberté (GAEL) XX - Grenoble.

Mar. 2012 Rencontres du Groupe de Recherche GAGC - CIRM, Luminy, France.

Jul. 2009 26èmes Journées Arithmétiques - Université de Saint-Étienne.

### Teaching

This year I was teaching Linear Algebra (in English) for first year students of economics at Warsaw University.

The following table summarizes the teachings I did earlier, in Toulouse University :

Level	Years	Matter
(L1)	2008-11	Computer aided Mathematics
(L1)	2011-12	Mathematic tools for Physics
(L1)	2011-12	Modelisation for Sciences
(L1)	2012-13	Mathematic Methodology
(L1)	2012-13	Statistics for Psychology
(L2)	2008-09	Analysis IV
(L3)	2011-12	History of Mathematics
(L3)	2012-13	Mathematics applied to Computer Science
(M1)	2011-12	Preparation to CAPES (Maths teacher degree)
(M2)	2009-12	Preparation to "Agrégation externe" (other Maths teacher degree)

From 2007 to 2013 I taught Computer aided Mathematics for student preparing the competitive examination for the admission to the *Grandes Écoles*. It gave me the occasion to create up to 60 exercices to be treated with the Computer Algebra system Maple.

## Languages

French : mother tongue.

English : read, spoken, written (good).

Portuguese : read (good), spoken, written (not so bad).

Spanish : read, spoken, written (basic).

Polish : beginner.

Maple : research and teaching (very good).

Sage : research (still training).

PALP : research (basic)