

# Curriculum vitae

## General Information

Name: Bilu  
First Name: Margaret  
Born: 11 July 1990 in Beer-Sheva, Israel  
Citizenship: Israeli and French  
E-mail: bilu@cims.nyu.edu  
Professional address: Courant Institute of Mathematical Sciences, 251 Mercer St, New York NY 10012, USA  
Current employment: Courant Instructor (starting September 2017)

## Studies

2014-2017: Doctoral studies at Université Paris-Sud Orsay under the supervision of Antoine Chambert-Loir  
2009-2014: Bachelor and Master studies at École Normale Supérieure, Paris  
2011-2012: Master of Advanced Studies in Mathematics (Part III Maths) at the University of Cambridge (UK)  
2007-2009: *Classes préparatoires* (an intensive undergraduate maths and physics course to prepare for the ENS entrance exam) at Lycée Louis le Grand, Paris

## Diplomas, studentships, prizes

2017: PhD in Mathematics, Université Paris-Sud, defended on November 28, 2017  
2013: Master 2 in Fundamental Mathematics, Université Pierre et Marie Curie, with distinction (*mention très bien*)  
2012: Senior Scholarship, Trinity College, Cambridge  
2012: Examination Prize, Trinity College, Cambridge  
2012: Master of Advanced Studies in Mathematics (Cambridge) with distinction  
2011: Knox Studentship, Trinity College, Cambridge  
2010: Master 1 in Mathematics with distinction (*mention très bien*)  
2010: Bachelor's degree in Mathematics with distinction (*mention bien*)

## Selected talks

October 2017 Algebra Seminar, University of Pennsylvania  
April 2017 Atkin Memorial Workshop on Height zeta functions, University of Illinois at Chicago  
March 20, 2017 Séminaire de théorie des nombres de l'IMJ-PRG, Paris  
October 25, 2016 Algebraic Geometry Seminar, Courant Institute of Mathematical Sciences, New York University  
October 10, 2016 *Special day on motivic integration and non-archimedean geometry*, Lille  
June 2016 Intercity Number Theory Seminar, KU Leuven, Belgium  
March 2016 Number Theory Seminar, ETH Zürich  
February 2016 "Géométrie et Singularités" seminar, Université Rennes 1  
March 2015 Project presentation at Arizona Winter School, University of Arizona  
June 2014 Colloque Jeunes Chercheurs en Théorie des Nombres, Bordeaux  
March 2014 "O-minimal Geometry and Diophantine Geometry" reading group: *The theorem of Pila and Wilkie*, Université Paris Sud  
April 2012: Part III Maths Seminar, University of Cambridge: *Elliptic curves with complex multiplication*  
December 2011: Part III Maths Seminar, University of Cambridge: *On the Mordell-Weil theorem*  
June 2011: Second year talk at École Normale Supérieure, supervised by Philippe Gille: *Division algebras and the Banach-Tarski paradox*.  
2008: Lycée Louis le Grand students' seminar: *Arithmetic of quadratic forms*.

## Schools and conferences

- 14-18 March 2015 Winter School on Arithmetic and Higher-Dimensional Varieties, University of Arizona, Tucson
- 11-13 June 2014 Colloque Jeunes Chercheurs en Théorie des Nombres, Bordeaux
- 15-19 March 2014 Winter School on Arithmetic Statistics, University of Arizona, Tucson
- 2-5 December 2013 Rencontre sur la stabilité en géométrie algébrique (ANR Positive), Roscoff, France
- 13-19 October 2013 Seminar on Motivic Integration, Oberwolfach, Germany
- 2013 May-June Motivic Invariants and Singularities Thematic Program, University of Notre Dame, Indiana
- 25-30 June 2012 Summer school “Around the Zilber-Pink conjectures”, Paris
- 1-7 August 2011 Summer school “Algebra and Geometry”, Iaroslavl, Russia

## Written mathematical texts

- 2017 PhD Thesis: *Motivic Euler products*, supervised by Antoine Chambert-Loir
- 2015 *Rational points on analytic varieties*, with L. Beshenov, Y. Bilu, P. Rath, in EMS Surv. Math. Sci. 2 (2015), 109-130.
- 2013 Master 2 thesis: *Motivic Poisson Formula*, supervised by Antoine Chambert-Loir
- 2012: Essay for the MAST in Mathematics at Cambridge: *Abelian varieties with complex multiplication*, supervised by Anthony Scholl
- 2010: Master 1 thesis: *Fields with even  $u$ -invariant*, with Guillaume Dubach supervised by Olivier Wittenberg
- 2009: Report for the ENS entrance examination: *Studying integral quadratic forms by  $p$ -adic methods*

## Teaching

- Fall 2017 MATH-UA.343.005 Algebra at the Courant Institute
- 2016-2017 Teaching assistant for the *Algebraic Topology* course at École normale supérieure
- 2016 Supervisor of the Bachelor thesis of two first year students at École normale supérieure
- 2014-2015 Teaching assistant at the computer science department of the IUT d’Orsay:  
– Exercise classes for the *Linear Algebra*, *Graphs and Automata* and *Probability and statistics* undergraduate courses.  
– Evaluation of student projects.
- 2009–2014 “Colles” (oral testing of students of classes préparatoires) at Lycée Louis le Grand, Paris

## Various activities related to mathematics

- since 2013 Leader or deputy leader of the French teams at various international mathematics contests: EGMO (European Girls’ Mathematical Olympiad), JBMO (Junior Balkan Mathematical Olympiad), RMM (Romanian Masters of Mathematics) .
- since 2012 Help in the organisation of the French mathematical olympiad training (teaching, correcting papers, preparing exercises and tests)
- since 2012 Teaching at the *Club Parimaths*, a math club for high school students
- 2014 Translation into French of H. Helfgott’s article *The ternary Goldbach conjecture*, published in the *Gazette des Mathématiciens* n° 140 (Bulletin of the French Mathematical Society).
- 2014 Supervision of a team of high school students for the French Tournament of Young Mathematicians.

## Languages

Russian (mother tongue), French, German, English (fluent), Polish, Italian (advanced level), basic Hebrew, Japanese and Spanish.