

DANNY SCARPONI

CURRICULUM VITAE

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CURRENT POSITION

Post-doctoral Researcher in Mathematics (Arithmetic Geometry)
Universität Regensburg

October 2016 -

- I am working in the group of Prof. Dr. Guido Kings. My Post-doc is supported by SFB 1085: Higher Invariants

RESEARCH INTERESTS

Arithmetic geometry. More specifically: arithmetic of abelian varieties (Manin-Mumford, Mordell-Lang conjectures), Arakelov theory, abelian polylogarithm and its realizations

TEACHING

Stipendiary Lecturer

Academic year 2015-2016

University of Oxford, Pembroke College

- Tutorials for 1st year Mathematics students: “Linear Algebra”, “Groups and Groups Actions”
- Tutorials for 2nd year Mathematics students: “Integration”
- 1.5 hours of teaching per week, from 1st January 2016 to 31 August 2016
- Description: I ran the tutorials for the three courses above and weekly marked my students’ work. I also marked my students’ collections for the courses above.

Teaching Assistant

Academic year 2015-2016

University of Oxford, Mathematical Institute

- Tutorials for 4th year Mathematics students: “Algebraic Geometry”
- 6 hours of teaching in total
- Description: I weekly marked my students’ work for the course above presented the solution of one of the exercises during the relative tutorial

P.h.D. student charged of teaching

Academic year 2014-2015

Université de Toulouse III – Paul Sabatier (France)

- Course and tutorials for 1st year Natural Sciences students : “Outils Mathématiques 1” and “Option Mathématiques”
- 64 hours of teaching in total
- Description: I gave both the lectures and the tutorials for the two courses above. I also prepared the exercises for the final exam and marked the final exam.

Tutor**Academic year 2012-2013****Università di Pisa**, Dipartimento di Matematica

- Tutor for 1st year Mathematics students: “Aritmetica” and “Analisi Matematica”
- 4 hours per week, for 8 weeks
- Description: I had four hours of office hours per week. Students could ask for help, both with the material from the courses above and with exercises.

EDUCATION**University of Oxford****2015 – 2016**

Visiting student (last year of P.h.D.)

Université de Toulouse III – Paul Sabatier**2013 – 2016****P.h.D. in Mathematics**

- Final grade: “Très honorable”
- Thesis: “*Effective forms of the Manin-Mumford conjecture and realizations of the abelian polylogarithm*”
- Advisor: Damian Rössler, Prof. of Pure Mathematics at University of Oxford

École Normale Supérieure de Cachan**2011 – 2012**

Erasmus student, First year of Master in Mathematics

Università di Pisa**2011 – 2013****M.Sc. in Mathematics**

- Final grade: 110/110 cum laude
- Thesis: “*The Mordell-Weil theorem and the theory of height functions*”
- Advisor: Angelo Vistoli, Prof. of Geometry at Scuola Normale Superiore di Pisa

Università di Pisa**2007 – 2011****B.Sc. in Mathematics**

- Final grade: 110/110
- Thesis: “Il teorema di Mordell”
- Advisor: Rita Pardini, Prof. of Geometry at Università di Pisa

PUBLICATIONS and PREPRINTS

- “*The realization of the degree zero part of the motivic polylogarithm on abelian schemes in Deligne-Beilinson cohomology*”, International Journal of Number Theory, 13, 2471 (2017)
- “*Sparsity of p -divisible unramified liftings for subvarieties of abelian varieties with trivial stabilizer*”, Algebra & Number Theory 12-2 (2018), 411--428.
- “*The Maillot-Roessler current and the polylogarithm on abelian schemes*” (with Guido Kings), submitted for publication

TALKS

- Beijing, 4-8 September 2017, Arakelov Intercity Seminar, “*The degree zero part of the abelian polylogarithm and the Bismut-Köhler higher torsion forms of the Poincaré bundle*”
- Imperial College (London), February 2017, Algebraic Geometry Seminar, “*An effective form of the Manin-Mumford conjecture*”
- Technische Universität München, November 2016, Arbeitsgemeinschaft Algebra, “*An effective form of the Manin-Mumford conjecture*”
- Universität Regensburg, November 2016, Oberseminar Arithmetische Geometrie, “*An effective form of the Manin-Mumford conjecture*”
- Universität Regensburg, September 2016, Arakelov Geometry - Archimedean and Non-Archimedean Aspects, “*The degree zero part of the motivic polylogarithm and the Deligne-Beilinson cohomology*”
- Nesin Matematik Köyü, June 2016, Géométrie algébrique en liberté, GaeL XXIV, “*An effective form of the Manin-Mumford conjecture*”
- University of Bath, February 2016 Calf seminar (Junior COW), “*The degree zero part of the motivic polylogarithm and the Deligne-Beilinson cohomology*”
- University of Oxford, February 2016, Junior Number Theory Seminar, “*The degree zero part of the motivic polylogarithm and the Deligne-Beilinson cohomology*”
- Universität Regensburg, January 2016, Oberseminar Arithmetische Geometrie, “*The degree zero part of the motivic polylogarithm and the Deligne-Beilinson cohomology*”
- Université Toulouse III, March 2015 Séminaire Étudiant, “*Grothendieck and the notion of scheme: a revolution in algebraic geometry*”
- Università di Pisa, November 2013, Algebraic geometry seminar, “*Theta and Heisenberg groups*”

CONFERENCES ATTENDED

- Pisa, 4-8 June 2018, A tail of Algebra and Geometry
- Providence, 14-18 May 2018, Birational Geometry and Arithmetics
- Beijing, 4-8 September 2017, Arakelov Intercity Seminar
- Regensburg, 5-9 September 2016, Arakelov Geometry - Archimedean and Non-Archimedean Aspects
- Ascona, 15-19 August 2016, Motives and complex multiplication
- Nesin Matematik Köyü, 13-17 June 2016, Géométrie algébrique en liberté, GaeL XXIV
- Oxford, 15 October 2015, Calf Seminar (Junior COW)
- Montpellier, 15-19 June 2015, Mathematics of the 21st century: the vision of A. Grothendieck
- Leuven, 1-5 June 2015, Géométrie algébrique en liberté, GaeL XXIII
- Berkeley, 6-10 May 2015, Arithmetic and Algebraic Differentiation: Witt vectors, number theory and differential algebra
- Roma, 8-11 September 2014, Intercity Seminar in Arakelov Geometry
- Strasbourg, 20-27 June 2014, Special week: Berkovich spaces and applications

LANGUAGES

- Italian: Native
- English: Fluent
- French: Fluent