

# CV

CARLO PAGANO

## 1. CURRICULUM VITAE: DR. CARLO PAGANO

### *Personal*

- **Date of birth:** March 17<sup>th</sup>, 1990
- **Nationality:** Italian.
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- **Homepage:** <http://guests.mpim-bonn.mpg.de/carlo.pagano90/>

### *Education*

- (01/09/2014-05/12/2018) **PhD in mathematics**, Leiden University, supervised by Hendrik Lenstra. Thesis title: “Enumerative arithmetic”.
- (01/02/2013-01/09/2014) **Master in mathematics**, Roma Tor Vergata, supervised by Rene’ Schoof. Thesis title: “Il teorema di Fontaine”. Vote: *110/110 cum laude*.
- (01/09/2008-01/02/2013) **Bachelor in mathematics**, Roma Tor Vergata, supervised by Ilaria Damiani. Thesis title: “Gruppi finiti di riflessione”. Vote: *110/110 cum laude*.

### *Awards*

- Spring 2013: **2nd at INDAM’s competition for master in mathematics.** (National exam to obtain a scholarship for master studies in mathematics)
- Summer 2012: **Silver medal at IMC**
- Summer 2010: **Bronze medal at IMC**

### *Employment*

September 2018-present: Post-doc at the Max Planck Institute for mathematics in Bonn. This position will last until September 2020.

### *Articles*

- [15] A sharp upper bound for the 2-torsion of multiquadratic fields (with P. Koymans)
- [14] Higher Redei reciprocity and integral points on conics (with P. Koymans)

- [13] Effective convergence of corank of random Redei matrices (with P. Koymans)
- [12] Constraining images of quadratic arboreal representations (with A. Ferraguti, *IMRN*)
- [11] On the 4-rank of class group of Dirichlet biquadratic fields (with E. Fouvry and P. Koymans)
- [10] Diameters of random Cayley graphs of nilpotent groups (with D. El-baz)
- [9] Higher genus theory (with P. Koymans, *IMRN*)
- [8] On the negative Pell equation. (with S. Chan, P. Koymans and D. Milovic)
- [7] The inverse problem for arboreal Galois representations of index two. (with A. Ferraguti and D. Casazza)
- [6] On the distribution of  $\text{Cl}(K)[l^\infty]$  for degree  $l$  cyclic fields. (with P. Koymans)
- [5] Jump sets in local fields.
- [4] Unit equations and Fermat surfaces in positive characteristic. (with P. Koymans, *Acta arithmetica*)
- [3] 4-ranks and the general model for ray class groups of imaginary quadratic number fields. (with E. Sofos )
- [2] Calculating the power residue symbol and  $I_{\beta}$ . (with K. de Boer, *Proceedings of the 2017 ACM on International Symposium on Symbolic and Algebraic Computation.*)
- [1] On the equation  $x + y = 1$  in finitely generated groups in positive characteristic. (with P. Koymans, *Quarterly journal of mathematics*, **68** (2017), 923-934 )

*Invited talks at conferences and seminars*

- (13) June 2020: *Number theory seminar* at IST, Vienna.
- (12) November 2019: *Number theory seminar* at ICMAT, Madrid.
- (11) October 2019: *Seminar on Algebra geometry and physics*, weekly seminar organized by Y. Manin at the Max Planck Institute for Mathematics, Bonn.
- (10) June 2019: *Enumerative arithmetic and the Cohen–Lenstra Heuristics*, conference at the Max Planck Insitute for mathematics, Bonn. I gave the closing talk.
- (9) April 2019: *Number theory lunch seminar* at the Max Planck Insitute for mathematics, Bonn.
- (8) December 2018: *Algebra seminar* in Bielefeld.
- (7) June 2018: *Algebra seminar* in Glasgow.

- (6) July 2017: *Journees arithmetique* in Cannes.
- (5) May 2017: *Number theory seminar* in Warwick.
- (4) April 2017: *Algebra seminar* in Leiden.
- (3) March 2017: *Intercity number theory seminar* in Leiden.
- (2) December 2016: *Number theory lunch seminar* at the Max Planck Institute for mathematics, Bonn.
- (1) November 2016: *Number theory lunch seminar* at the Max Planck Institute for mathematics, Bonn.

*Other responsibilities and activities*

I have been asked to referee for the following journals:

- *Algebra and Number theory.*
- *Journal für die reine und angewandte Mathematik.*
- *Advances in Mathematics*
- *Annali di matematica pura ed applicata.*
- *Journal of number theory.*
- *Research in Number theory.*

*Other skills*

**Languages:** Italian (native), English (fluent), Spanish (basic).

**Music:** I play the piano. In 2006 I passed the exam of basic music skills at *Conservatorio di Benevento*.