DATA

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born in Siena (SI), Italy, July 20th, 1971

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56124 Pisa (PI), Italy

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EDUCATION - CURRENT POSITION

June 1995 Laurea in Mathematics from University of Pisa (ITA), cum laude.

June 2000 Diploma from the Master Class in "Arithmetic Algebraic Geometry" organized by the Mathematical Research Institute, University of Utrecht (NL).

May 2002 PhD in Mathematics from the Scuola Normale Superiore in Pisa (ITA), cum laude.

July 2005 Research Assistant in Algebra at the University of Calabria (ITA) from July 15th.

PUBBLICATIONS

1. *Extensions of the p-adic fields generated by the roots of a single polynomial in two variables*, Ann. di Mat. Pura ed Appl. di Firenze, Serie IV **175** (1998), 223-232.

2. *Functions $f : \mathbb{Z}_{/p^n\mathbb{Z}} \longrightarrow \mathbb{Z}_{/p^n\mathbb{Z}}$ induced by polynomials of $\mathbb{Z}[X]$*, Ann. di Mat. Pura ed Appl. di Firenze, Serie IV **181** (2002), 95-104.

3. *Greenberg's conjecture for $\mathbb{Z}_p^d$-extensions*, Acta Arith. **108** (2003), 357-368.

4. *Three-descent and the Birch and Swinnerton-Dyer conjecture*, Rocky Mount. J. of Math. **34** (2004), 13–27.

5. *Greenberg's conjecture for multiple $\mathbb{Z}_p$-extensions*, Proceedings of the Secondo Convegno Italiano di Teoria dei Numeri, Parma 13 - 15 novembre 2003, Riv. Mat. Univ. Parma **7** (3*) (2004), 151–158.

6. *Greenberg's conjecture and capitulation in $\mathbb{Z}_p^d$-extensions*, J. Number Theory **122** (2007), 121–134.

7. *A note on p-ranks of class groups in $\mathbb{Z}_p$-extensions*, JP J. Algebra Number Theory Appl. **9** (2007), 95–103.

8. *3-Selmer groups for curves $y^2 = x^3 + a$*, Czechoslovak Math. J. **58** (2008), 429–445.

9. *Control theorems for elliptic curves over function fields*, (with I. Longhi) Int. J. Number Theory **5** (2009), no. 2, 229–256.

10. *Torsion points on elliptic curves over function fields and a theorem of Igusa*, (with I. Longhi and S. Vigni) Expo. Math. **27** (2009), no. 3, 175–209.

11. *Selmer groups for elliptic curves in $\mathbb{Z}_l^d$-extensions of function fields of characteristic p*, (with I. Longhi) Ann. Inst. Fourier **59** (2009), no. 6, 2301–2327.

12. *Aspects of Iwasawa theory over function fields*, (with F. Bars and I. Longhi), CRM (Centre de Recerca Matemàtica) Barcelona, preprint n. 923, (2010).

SEMINARS - TALKS

Oct. 1999 "Iwasawa theory and Greenberg's pseudo-null conjecture" at the Intercity Number Theory Seminar in Leiden (NL).

May 2002 "Iwasawa theory for multiple $\mathbb{Z}_p$-extensions" (italian) at the University of Rome "Tor Vergata" (ITA).

Nov. 2003 "Greenberg's conjecture for multiple $\mathbb{Z}_p$-extensions" at the "Second Italian Congress in Number Theory" in Parma (ITA).

March 2005 "Iwasawa theory for $\mathbb{Z}_p$-extensions" (italian) at the University of Pisa (ITA).

April 2005 "Iwasawa theory for elliptic curves" (italian) at the University of Pisa (ITA).

Jan. 2007 "Towards a Main Conjecture in Iwasawa theory for elliptic curves over function fields" at the "Laboratoire de Mathématiques Nicolas Oresme" Université de Caen (FR).

March 2007 "Iwasawa theory and Main Conjecture for elliptic curves over number fields" (italian) at the Scuola Normale Superiore in Pisa (ITA).

July 2007 "Control theorem and Main Conjecture for elliptic curves over function fields" at the "XXVth Journèe Arithmètiques" in Edimburgh (GB).

Sept. 2007 "Control theorem and L-functions for elliptic curves over function fields" at the conference in "Arithmetic Algebraic Geometry" in Poznan (PL).

March 2008 "Iwasawa theory for $\mathbb{Z}_p$-extensions" at the University of Pisa (ITA).

May 2008 "Iwasawa theory for elliptic curves over function fields" at the "Workshop on Analytic Number Theory" in Parma (ITA).

Apr. 2010 "On Main Conjectures for $\mathbb{Z}_p^\infty$-extensions" at the "Workshop on Iwasawa theory over function fields of characteristic $p > 0$" in Barcelona (ES).

OTHER CONFERENCES - VISITS

July 1997 Summer School on "Arithmetical Theory of Elliptic Curves" in Cetraro (ITA).

March 1999 Visiting the Université de Franche-Comté in Besancon (FR).

April-June 1999 Visiting the University of Washington in Seattle (USA).

A.A. 1999-2000 Master Class in "Arithmetic Algebraic Geometry" in Utrecht (NL).

July 1999 "XXIth Journèe Arithmètiques" in Rome (ITA).

June 2002 "Explicit Methods in Galois Theory" in Leiden (NL).

July 2004 "Congrès Iwasawa" in Besancon (FR).

July 2006 "Congrès Iwasawa" in Limoges (FR).

Aug. 2006 "ICM (International Congress of Mathematics) 2006" in Madrid (ES).

July 2008 "Congrès Iwasawa - Iwasawa 2008" in Augsburg (GER).

Jan-April 2009 Visiting the University of Pisa.

July 2009 "Modular forms, p-adic Hodge Theory and Applications" in Roscoff (FR).

Mar. 2010 "Italy-India Conference on Diophantine and Analytic Number Theory" at the Centro Ennio de Giorgi, Scuola Normale Superiore, Pisa.

March-April 2010 Visiting the University of Barcelona (ES) for the CRM Research Program in "Arithmetic geometry for function fields of positive characteristic".

GRANTS - POSTDOC

A.A. 1999-2000 Grant from the MRI for the Master Class in "Arithmetic Algebraic Geometry" in Utrecht (NL) (8 months).

Dec. 2002 Postdoc position at the University of Rome "Tor Vergata" (ITA) (1 year).

June 2003 Grant from the University of Pisa (ITA) (6 months).

Feb. 2004 Postdoc position at the University of Pisa (ITA) (2 years, terminated on July 15th, 2009 for the Research Assistant position at the University of Calabria).

TEACHING

A.A. 2000/01 "Geometry" (Assistant) in La Spezia.
"Discrete Mathematics" (Assistant) University of Pisa.

A.A. 2001/02 "Analysis I" (Assistant) in La Spezia.
"Algebra" (Assistant) in La Spezia.
"Algebra" (Assistant) University of Pisa.

A.A. 2002/03 "Elements of Analytic Geometry" (Assistant) University of Pisa.
"Linear Algebra" (Assistant) University of Pisa.

A.A. 2004/05 "Mathematics 2" (Assistant) University of Pisa.

A.A. 2005/06 University of Calabria:
"Introduction to groups, rings and fields".
"Arithmetic" (Assistant).

A.A. 2006/07 University of Calabria:
"Introduction to groups, rings and fields".
"Arithmetic" (Assistant).
"Advanced Algebra (Number Theory)" PhD course.

A.A. 2007/08 University of Calabria:
"Introduction to groups, rings and fields".
"Arithmetic" (Assistant).
"Geometry".

A.A. 2008/09 "Iwasawa theory for elliptic curves over global fields" PhD course at the University of Pisa.
University of Calabria:
"Introduction to groups, rings and fields".
"Arithmetic" (Assistant).
"Discrete Mathematics II".

A.A. 2009/10 University of Calabria:
"Introduction to groups, rings and fields".
"Advanced algebra".
"Iwasawa theory: class groups and elliptic curves" PhD course.

Advisor for 5 Laurea Triennale in Mathematics at the University of Calabria.
Advisor for 5 Laurea Magistrale in Mathematics at the University of Calabria.
Advisor for 2 PhD students at the University of Calabria.

OTHER ACTIVITIES

Research program "Diophantine approximation and algebraic number theory"
PRIN (2005/2007) Scientific coordinator Prof. Perelli Alberto (University of Genova);
PRIN (2007/2009) Scientific coordinator Prof. Zannier Umberto Maria (Scuola Normale Superiore of Pisa).

Reviewer for Zentralblatt.

Referee for Journal of Number Theory