

Annamaria IEZZI

Curriculum Vitae et Studiorum

Department of Mathematics & Statistics
Office CMC110
4202 East Fowler Avenue
Tampa, FL 33620-5700 - United States
✉ aiezzi@usf.edu
🌐 www.aiezzi.it

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Personal Information

Annamaria IEZZI
Born in Teramo (Italy) on January 19, 1989
Nationality: Italian

Current Position

Since 08/2017 **Postdoctoral Scholar Instructional** at *Department of Mathematics & Statistics of University of South Florida*, in Tampa.
Supervisors: Jean-François BIASSE and Xiang-dong Hou

Previous Positions

09/2015 – 08/2017 **Research and teaching assistant** (ATER 100% - Attachée Temporaire d'Enseignement et de Recherche) at *Institut de Mathématiques de Marseille (I2M) of Aix-Marseille Université*, in Marseille.

Education

11/12 – 07/16 **Ph.D in Mathematics**, *Aix-Marseille Université* (grant of *LabEx Archimède*),
Title of the thesis: *Nombre de points rationnels des courbes singulières sur les corps finis* (Number of rational points on singular curves over finite fields).

Supervisor: Yves Aubry.

Beginning: 12 November 2012.

Defense: 6 July 2016 in Marseille, distinction *très honorable*.

Jury	Yves Aubry	Université de Toulon	Supervisor
	Massimo Giulietti	Università degli Studi di Perugia	Examiner
	Marc Hindry	Université Paris Diderot	Referee
	James W. P. Hirschfeld	University of Sussex	Referee
	David Kohel	Aix-Marseille Université	Examiner
	Marc Perret	Université de Toulouse II	Examiner
	Serge Vladuts	Aix-Marseille Université	Examiner

09/10 – 07/12 **M.S. cum laude in Mathematics**, *Università degli studi Roma Tre*, Rome.
Title of the master's thesis: *Domini Almost Dedekind* (Almost Dedekind domains)
Supervisor: Stefania Gabelli.

09/11 – 01/12 **Five-months Erasmus exchange program**, *Université d'Aix-Marseille II*, Marseille, within the master *Mathématiques Discrètes et Fondements de l'Informatique*.

09/07 – 07/10 **B.S. cum laude in Mathematics**, *Università degli studi Roma Tre*, Rome.

07/07 **Scientific High School Degree**, Liceo Scientifico Statale A. Einstein, Teramo.
Final grade: 100/100.

Research activities

Research interests

Algebraic geometry over finite fields (algebraic curves, number of rational points, zeta function, function fields, etc.), theory of error-correcting codes.

Research projects

Member since April 2016 of the research project **ANR Manta** *Algebraic geometry and coding theory* about error-correcting codes built using algebraic geometry and number theory and their applications in cryptography, multiparty computation and complexity theory.

Publications

- [2] Y. Aubry, A. Iezzi - *Optimal and maximal singular curves*, *Contemporary Mathematics* 686, pp. 31-43, (2017).
- [1] Y. Aubry, A. Iezzi - *On the maximal number of points on singular curves over finite fields*, *Mosc. Math. J.* 15 (2015), no. 4 pp. 615-627.

Research talks

- 03/05/2018 *A singular trip through the world of algebraic curves over finite fields*, Discrete Mathematics Seminar, Department of Mathematics & Statistics, University of South Florida.
- 11/20/2016 *Curve su campi finiti a singolarità prescritte (Curves over finite fields with prescribed singularities)*, Seminar of Commutative Algebra, Dipartimento di Matematica e Fisica, Università degli studi di Roma Tre.
- 11/05/2015 *Courbes optimales et maximales (Optimal and maximal curves)*, Seminar of Arithmetic and Information Theory, I2M, Université d'Aix-Marseille.
- 05/18/2015 *Towards maximal singular curves over finite field*, Arithmetics, Geometry, Cryptography and Coding Theory (AGCT), CIRM, Marseille.
- 02/17/2015 *Sur le nombre maximum de points rationnels d'une courbe singulière sur un corps fini (On the maximal number of points on singular curves over finite fields)*, Seminar of Algebra at IMATH, Université de Toulon.
- 01/29/2015 *Sur le nombre maximum de points rationnels d'une courbe singulière sur un corps fini (On the maximal number of points on singular curves over finite fields)*, Seminar of Arithmetic and Information Theory, I2M, Université d'Aix-Marseille.
- 06/11/2014 *Singular curves over finite fields with many rational points*, Yet Another Conference on Cryptography (YACC), Porquerolles Island, France.
- 05/12/2014 *Singular curves over finite fields with many rational points*, Antalya Algebra Days XVI, Antalya, Turkey.
- 05/14/2013 *Courbes avec un nombre fixé de points rationnels (Curves with a prescribed number of rational points)*, Seminaire of Algebra at IMATH, Université de Toulon.

Teaching activities

2017-2018 Post-doc, University of South Florida :

- **MAC 2311 - Calculus 1** (Spring 2018).
- **MAC 2311 - Calculus 1** (Fall 2017).

2016-2017 ATER 100%, Aix-Marseille Université:

- **Lectures + exercice sessions:** *Algèbre Linéaire* (1st year B.S. in Mathematics and Computer Science - 59h).
- **Lectures + exercice sessions:** *Géométrie et Arithmétique 1* (1st year B.S. in Mathematics and Computer Science - 95h).
- **Refresher course** in mathematics: *Passerelle pour les Maths* (1st year B.S. in Mathematics and Computer Science - 20h).
- **Stages Hippocampe** (three-days research initiation for high school students): *Allô Papa Tango Charlie, théorie des codes correcteurs* (12h - supervisor), *The Mathematics of Sudoku* (12h - tutor).

2015-2016 ATER 100%, Aix-Marseille Université:

- **Lectures + exercice sessions:** *Algèbre Linéaire* (1st year B.S. in Mathematics and Computer Science - 77h).
- **Lectures + exercice sessions:** *Géométrie et Arithmétique 1* (1st year B.S. in Mathematics and Computer Science - 77h).
- **Refresher course** on Mathematics: *Passerelle pour les Maths* (1st year B.S. in Mathematics and Computer Science - 26h).
- **Stages Hippocampe:** *Allô Papa Tango Charlie, théorie des codes correcteurs* (12h - supervisor and tutor).

2014-2015 During my third year of PhD, Aix-Marseille Université :

- **Exercice sessions:** *Algèbre Linéaire* (1st year B.S. in Mathematics and Computer Science - 20h).
- **Exercice sessions:** *Introduction à l'analyse* (1st year B.S. in Mathematics and Computer Science - 20h).
- **Refresher course** in mathematics: *Passerelle pour les Maths* (1st year B.S. in Mathematics and Computer Science - 26h).
- **Referent teacher** (1st year B.S. in Mathematics and Computer Science - 8h).

2013-2014 During my second year of PhD, Aix-Marseille Université :

- **Exercice sessions:** *Algèbre Linéaire* (1st year B.S. in Mathematics and Computer Science - 40h).
- **Stages Hippocampe:** *Théorie des noeuds* (12h - tutor), *Les Mathématiques des jeux : comment gagner presque sûrement* (12h - tutor) .

2010-2011 During my first year of M.S, Università degli Studi di Roma 3 :

- **Tutorial:** *Geometria 3, Topologia generale e elementi di topologia algebrica* (24h).
- **Tutorial:** *Geometria 2, Geometria Euclidea e proiettiva* (24h).

2009-2010 During my third year of B.S, Università degli Studi di Roma 3 :

- **Tutorial:** *Teoria delle equazioni e teoria di Galois* (24h).
- **Tutorial:** *Geometria 2, Geometria Euclidea e proiettiva* (24h).

Activities of populazization

- Founder member of **Pi day association** that promotes and communicates mathematics to the general public. The association has been awarded the **d'Alembert Prize** in 2016 by the French Mathematical Society (Société Mathématique de France).
- Member of **GDS Audimath** (Groupement de Services : Autour de la Diffusion des Mathématiques), a network created by CNRS in order to help the French academic community in developing activities of populazion of Mathematics for the general public.

Organisation of events

- 04/26/2017 Co-organiser of **Treize Minutes Jeunes Chercheurs 2017** - Alcazar, Marseille - 300 people.
Night of multidisciplinary conferences by young researchers, organized by a group of Ph.D students of Aix-Marseille Université.
- 03/13-19/17 General chair of **Tournée de π** - 3.14 Paris (Théâtre des Variétés), 3.16 Marseille (Le Silo), 3.19 Lyon (Le Transbordeur) - 2000 people.
Mathematical musical From Marseille to Vegas revolved around three talks for the general public.
- 05/10/2016 Co-organiser of **Treize Minutes Jeunes Chercheurs 2016** - Alcazar, Marseille - 300 people.
Night of multidisciplinary conferences by young researchers, organized by a group of PhD students of Aix-Marseille Université.
- 03/14/2016 Co-organiser of **Pi day 2016** - Théâtre National de la Criée, Marseille - 700 people.
A mathematical musical Les π travaux d'Archimède, revolved around three talks for the general public, to celebrate in a joyous atmosphere the most famous of the constants!
- 03/14/2015 Co-organiser of **Pi day 2015** - MuCEM, Marseille - 500 people.
Mathematical day revolved around a morning-show with three talks to the general public, a pie contest and an afternoon of stands and fun animations.

Talks

- 01/22/2016 *Allô Papa Tango Charlie, théorie des codes correcteurs (Allô Papa Tango Charlie, theory of error-correcting codes)*, for a High School class, Marseille.
- 06/06/2014 *Les nombres premiers ne sont pas si aléatoires (Prime numbers are not so random)*, Journée d'étude sur le Hasard (Thematic day on Randomness), Fort St Jean, Marseille.
- 03/25/2014 *L'hypothèse de Riemann dans le paysage des courbes sur les corps finis (The Riemann Hypothesis in the landscape of curves over finite fields)*, PhD Student seminar, Marseille.
- 03/14/2014 *Pi... comme pizza (Pi... as pizza)*, Pi day 2014, Campus Saint-Charles, Marseille.

Stands, expositions, etc.

- 10/2016 Guide for the stand *Tous les chemins mènent à Rome-Dragon (T3) (All roads lead to Rome-Dragon)*, *Fête de la Science 2016*, Vieille Charité, Marseille.
- 05/2016 Guide for the *Exposition Imaginary*, Salon Culture et Jeux Mathématiques, Paris.
- 02/2016 Participation to the writing of the theatrical piece *Les π travaux d'Archimède*, played during *Pi day 2016*, at Théâtre National de la Criée in Marseille.
- 10/2015 Creation of a stand on cryptography and coding theory: *Le charabia du numérique : mégapixels, gigaoctets, cryptage... et autres gros mots !*, *Fête de la Science 2015*, Villa Méditerranée, Marseille.
- 03/22/2015 Guide for the *Exposition Imaginary*, Vieux Port, Marseille.
- 03/14/2015 Creation of the stand *Les Mathématiques nous transportent en... cuisine ! (The Mathematics of cooking)*, *Pi day 2015*, MuCEM, Marseille.

Administrative Responsibilities

- 11/16-01/18 Secretary of *Pi day* association.
- 03/14-08/17 Appointed member of 12M council (college of non-permanent researchers).
- 11/15-11/16 Treasurer of *Pi day* association.
- 11/01/2015 Founder member of the **Pi day association**, that promotes and communicates mathematics to the general public. The association has been awarded the **d'Alembert Prize** in 2016 by the French Mathematical Society (Société Mathématique de France).

Other collective tasks

Reviewer for the journal *Finite Fields and Their Applications* and for *Mathematical Reviews*.

- 11/25/2015 Organiser of a welcome day for the academic year 2015/2016 of the *Mathematics and Computer Science Doctoral School* of Aix-Marseille Université.
- 10/14/2015 Organiser of a welcome day for the academic year 2014/2015 of the *Mathematics and Computer Science Doctoral School* of Aix-Marseille Université.

Language skills

Italian (mother tongue), French (fluent), English (fluent), Spanish (fluent), Portuguese (good command).

- 2012-2017 Coordinator of the project **Café des Langues Luminy** (in collaboration with the *Centre des Langues de Luminy* (CIELL) of Aix-Marseille Université and the *Erasmus Student Network (ESN) Marseille association*) and animator for the Italian language. The project was awarded in 2016 by the **Trophée Phocéén Étudiant** of the city of Marseille for students initiatives.

Computer skills

- Symbolic computation Wolfram Mathematica, Sage
- Programming C, Python
- Others html, css

Hobbies

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|---------------|-----------|
| - Photography | - Cooking |
| - Piano | - Dance |
| - Tennis | - Soccer |