

# Annamaria IEZZI

## Curriculum Vitae et Studiorum

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**Last update** : August 25, 2018

### Personal Information

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

### Current Position

Since 08/17 **Postdoctoral Scholar Researcher** - *Department of Mathematics & Statistics, University of South Florida, Tampa.*  
Supervisors: Jean-François Biasse and Xiang-dong Hou.

### Previous Positions

09/15 – 08/17 **ATER 100%** (Attachée Temporaire d'Enseignement et de Recherche) ~ **Visiting assistant professor** - *Institut de Mathématiques de Marseille (I2M), Aix-Marseille Université, Marseille.*  
10/13 – 09/15 **Monitorat** ~ **Teaching assistant** - *Institut de Mathématiques de Marseille (I2M), Aix-Marseille Université, 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*.

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

09/10 – 07/12 **M.S. cum laude in Mathematics**, *Università degli Studi di 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 di Roma Tre*, Roma.  
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.), cryptography (isogeny-based cryptography, post-quantum cryptography).

## Preprint

J.-F. Biasse, [A. Iezzi](#), M. Jacobson Jr. - *A note on the security of CSIDH*, arXiv:1806.03656. Submitted.

## 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

### UNITED STATES

- 2018-2019 Post-doc, University of South Florida :
  - *MAC 2311 - Calculus 1* (Undergraduate course - Fall 2018).
  - *Algebraic curves over finite fields* (Graduate course - Fall 2018).
- 2017-2018 Post-doc, University of South Florida :
  - *MAC 2311 - Calculus 1* (Undergraduate course - Spring 2018).
  - *MAC 2311 - Calculus 1* (Undergraduate course - Fall 2017).

### FRANCE

- 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) .

#### ITALY

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

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

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

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

## Activities of popularization

- 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  $\pi$**  - 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  $\pi$  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  $\pi$  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*.
- Organiser of a welcome day for the academic years 2014/2015 and 2015/2016 of the *Mathematics and Computer Science Doctoral School* of Aix-Marseille Université.

## Language skills

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

- 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 has been awarded in 2016 the **Trophée Phocéén Étudiant** (for students initiatives) by the city of Marseille .

## Computer skills

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

## Hobbies

Photography, cooking, piano, dance (jazz, contemporary, hip-hop, latin, rock&roll), tennis, friends,...