



GENERAL  
INFORMATION

Legal Name: DE ZARZA I CUBERO Irene.  
E-mail: [z@dezarza.ch](mailto:z@dezarza.ch)

CAREER

**The Chinese University of Hong Kong (CUHK).** Hong Kong.  
Research Assistant. October 2017 - February 2018.  
Department of Computer Science and Engineering.

**Carnegie Mellon.** Pittsburgh.  
Research Assistant. June 2017 - July 2017.  
School of Computer Science. Robotics.

**City University of Hong Kong.** Hong Kong.  
Senior Research Assistant. January 2017 - May 2017.  
Department of Electrical Engineering.

**ETH Zürich.** Zürich.  
Graduate Research Assistant. April 2015 - September 2016.  
Department of Information Technology and Electrical Engineering.  
Laboratory of Computer Vision.

**City University of Hong Kong.** Hong Kong.  
Research Associate. July 2015 - August 2015.  
Department of Computer Science.

**Carnegie Mellon.** Pittsburgh.  
Research Associate I. June 2014 - August 2014.  
School of Computer Science. Robotics.

EDUCATION

**ETH Zürich.** Zürich.  
Doctor of Science. April 2015 - March 2017 (withdraw, post-candidacy).  
Department of Information Technology and Electrical Engineering.  
Laboratory of Computer Vision.

**City University of Hong Kong.** Hong Kong.  
MS Multimedia Information Technology. September 2013 - February 2015.  
Department of Electrical Engineering.  
**GPA: 3.86** (0-4.3 scale).  
**Classification of Award: Distinction.**

**Thesis:** A Library for Fast Kernel Expansions with Applications to Computer Vision and Deep Learning.

**Academic Distinctions:**

- MS Internship Sponsorship 2014.  
Award for top performing students. Robotics. Carnegie Mellon. Pittsburgh.

**Carnegie Mellon.** Pittsburgh.

Visiting Student. September 2014 - February 2015.  
School of Computer Science. ML Department.

**Carnegie Mellon.** Pittsburgh.

Visiting Student. May 2014 - August 2014.  
School of Computer Science. Robotics.

**Universitat Autònoma de Barcelona (UAB).** Barcelona.

Mathematics. 2011 - 2013.  
Minor in Pure Mathematics.  
Faculty of Sciences.

**Thesis:** Physical-layer Network Coding: Design of Constellations over Rings.  
**Grade: Excellent.** First Class with Distinction.

**Universitat de Barcelona (UB).** Barcelona.

Mathematics, Licentiate. First Cycle. 2007 - 2011.  
Department of Mathematics and Computer Science.

**University Entrance Examination.**

**Average Grade: 8.93/10.** First Class with Distinction.

**Academic Distinctions:**

- First year scholarship for university studies. Ministry of Education.  
This award is given to the top nationwide first year university students.
- First year scholarship for university studies. Caixa Manresa.  
This award is given to the top university entrance examination average grades in the region of Catalunya.

**Technological Bacalaureate.** 2005 - 2007.

**Average Grade: 10/10.** First Class Degree and Honorary Scholarship.

**Academic Distinctions:**

- Outstanding Thesis of Research: Squaring the Circle. Study of the different mathematical approaches to solve the ancient problem of the quadrature of the circle.
- Outstanding Curriculum.

## PUBLICATIONS

Curtó and **Zarza**.  
Doctor of Crosswise: Reducing Over-parametrization in Neural Networks.  
<http://arxiv.org/pdf/1905.10324>

Curtó, **Zarza**, Torre, King and Lyu.  
High-resolution Deep Convolutional Generative Adversarial Networks.  
<http://arxiv.org/pdf/1711.06491v13>

Curtó, **Zarza**, Smola and Gool.  
Segmentation of Instances by Hashing.  
<http://arxiv.org/pdf/1702.08160v9>

Curtó, **Zarza**, Yang, Smola, Torre, Ngo and Gool.  
McKernel: A Library for Approximate Kernel Expansions in Log-linear Time.  
<http://arxiv.org/pdf/1702.08159v10>

## DISSERTATIONS

MS Thesis. Multimedia Information Technology.  
A Library for Fast Kernel Expansions with Applications to Computer Vision and Deep Learning.  
Supervisors: Ngo and Smola.  
Carnegie Mellon. Pittsburgh. 2014.  
<http://zarza.hk/zarza.pdf>  
[http://zarza.hk/slides\\_zarza.pdf](http://zarza.hk/slides_zarza.pdf)

Mathematics.  
Physical-layer Network Coding: Design of Constellations over Rings.  
Supervisors: Vázquez and Mondelo.  
Universitat Autònoma de Barcelona. Bellaterra. 2013.  
[http://blogs.uab.cat/zarza/files/2019/05/pfc\\_zarza.pdf](http://blogs.uab.cat/zarza/files/2019/05/pfc_zarza.pdf)  
[http://blogs.uab.cat/zarza/files/2019/05/slides\\_pfc\\_zarza.pdf](http://blogs.uab.cat/zarza/files/2019/05/slides_pfc_zarza.pdf)

## WORK EXPERIENCE

**Institut d'Educació Secundària Joan Coromines.** Barcelona.  
Teaching Assistant. 2005 - 2006.

## LANGUAGES

English -  
**TOEFL Internet Based test.** 11-12-2016. **Score 102/120.**

## SERVICES

First European Training School in Network Coding: Random Network Coding and Designs over  $GF(q)$ . Universitat Autònoma de Barcelona (UAB). Barcelona. 4 - 8 February 2013.

From designs over  $GF(q)$  to applications of networking: a cross-road for mathematics, computer science and engineering.  
Attendee and Volunteer.

## EXTRACURRICULAR ACTIVITIES

Program of Open Mentoring. Department of Computer Science. The University of Hong Kong. 2014 - 2018.

Symposium of the Royal Society of Mathematics, The Millennium Problems. Awarded with an assistance grant by Institut de Matemàtica de la Universitat de Barcelona (UB). Barcelona. 1 - 3 June 2011.

Course in Investment and Financial Markets. Technical Analysis and Risk Management. Barcelona. 23 - 26 May 2011.

Course in Investment and Financial Markets. Barcelona. 18 - 21 April 2011.

Competition of Entrepreneurship. EMPREN UPC. 1st Edition. Universitat Politècnica de Catalunya (UPC). Finalist project awarded with honorable mention and 1000 euros. Barcelona. 14 March 2011 - 14 June 2011.

## PROGRAMMING

C, C++, Java, Python, MATLAB and Prolog.

## SOFTWARE

L<sup>A</sup>T<sub>E</sub>X, R, Maple, Mathematica and EViews.