



GENERAL  
INFORMATION

Legal Name: DE ZARZA I CUBERO Irene.  
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CAREER

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

EDUCATION

**Carnegie Mellon.** Pittsburgh.  
Master of Science (exchange). May 2014 - February 2015.  
School of Computer Science. ML Department and Robotics.  
**Thesis:** A Library for Fast Kernel Expansions with Applications to Computer Vision and Deep Learning.

**City University of Hong Kong.** Hong Kong.  
Master of Science. September 2013 - February 2015.  
Department of Electrical Engineering.  
**GPA: 3.86** (0-4.3 scale).  
**Classification of Award: Distinction.**  
**Academic Distinctions:**

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

**Universitat Autònoma de Barcelona (UAB).** Barcelona.  
Degree in 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 Baccalaureate. 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, **Zarza**, Kitani, King and Lyu.

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/1711.06491>

Curtó, **Zarza**, Smola and Gool.

Segmentation of Objects by Hashing.

<http://arxiv.org/pdf/1702.08160>

Curtó, **Zarza**, Yang, Smola, Torre, Ngo and Gool.

McKernel: A Library for Approximate Kernel Expansions in Log-linear Time.

<http://arxiv.org/pdf/1702.08159>

## DISSERTATIONS

Master of Science.

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)

Degree in 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.