



GENERAL  
INFORMATION

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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.  
Specialization in Pure Mathematics.  
Department of 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.

[https://www.zarza.hk/c/doctor\\_of\\_crosswise.pdf](https://www.zarza.hk/c/doctor_of_crosswise.pdf)

Curtó, **Zarza**, Torre, King and Lyu.

High-resolution Deep Convolutional Generative Adversarial Networks.

<https://www.zarza.hk/c/hdcgan.pdf>

Curtó, **Zarza**, Smola and Gool.

Segmentation of Objects by Hashing.

[https://www.zarza.hk/c/c\\_and\\_z.pdf](https://www.zarza.hk/c/c_and_z.pdf)

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

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

<https://www.zarza.hk/c/mckernel.pdf>

De Curtó i Díaz, **De Zarza i Cubero** and Vázquez.

Secure Network Coding: Overview and State-of-the-art.

Universitat Autònoma de Barcelona. Bellaterra. 2012.

[https://blogs.uab.cat/zarza/files/2019/05/nc\\_decurto12.pdf](https://blogs.uab.cat/zarza/files/2019/05/nc_decurto12.pdf)

## 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.

<https://www.zarza.hk/z/dezarza.pdf>

[https://www.zarza.hk/z/slides\\_dezarza.pdf](https://www.zarza.hk/z/slides_dezarza.pdf)

Degree in Mathematics.  
Physical-layer Network Coding: Design of Constellations over Rings.  
Supervisors: Vázquez and Mondelo.  
Universitat Autònoma de Barcelona. Bellaterra. 2013.  
[https://blogs.uab.cat/zarza/files/2019/05/pfc\\_dezarza.pdf](https://blogs.uab.cat/zarza/files/2019/05/pfc_dezarza.pdf)  
[https://blogs.uab.cat/zarza/files/2019/05/slides\\_pfc\\_dezarza.pdf](https://blogs.uab.cat/zarza/files/2019/05/slides_pfc_dezarza.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  $GF(q)$ . IEEE Information Theory Society. 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.