

GENERAL Legal Name: DE ZARZA I CUBERO Irene. INFORMATION e-mail: z@dezarza.ch webpage: dezarza.ch

## 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

Curtó, Zarza and Vázquez.

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

Universitat Autònoma de Barcelona. Bellaterra. 2012.

http://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.

http://zarza.hk/z/dezarza.pdf

http://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.

http://blogs.uab.cat/zarza/files/2019/05/pfc\_dezarza.pdf

http://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). 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. EMPRÈN 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.