

# Diego Castán, PhD

PhD. Electrical Engineer  
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January 31, 2015

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## Education

- **Ph.D. Speech/Audio Signal Processing and Pattern Recognition** 2009 – 2014  
*University of Zaragoza*
  - Thesis: “Advances on Audio Segmentation and Audio Content Description for Multimedia Documents” - Graduated Cum Laude
  - Relevant areas: Audio Segmentation, Multimedia Events Detection, Speech Analytics, Speaker diarization, Language ID, Pattern Recognition, Machine Learning, Speech/Signal Processing, Probabilistic Graphical Models, Natural Language Processing, Statistical Signal Processing
- **M.Sc. Information technology and Radio-Mobility** 2008 – 2009  
*University of Zaragoza*
- **M.Sc. Electrical Engineering (Telecommunications)** 2001 – 2008  
*University of Zaragoza*
- **Intermediate Music Degree - Classic Guitar** 1991 – 2002  
*Professional Music Conservatory of Zaragoza*

## Work Experience

- **Instituto de Investigación de Aragón (I3A)**, Zaragoza, Spain 2013 – present  
Research staff associated to “TIMPANO: Technology for complex Human-Machine conversational interaction with dynamic learning”. Granted by TIN2011-28169-C05-02, Ministry of Economy and Competitiveness. Research topics: Performance of anti-spoofing systems and audio segmentation-by-classification approaches.
- **Instituto de Investigación de Aragón (I3A)**, Zaragoza, Spain 2009 – 2013  
PhD. student researcher associated to “SD-TEAM: Personalization and autonomous adaptation to the constraints of context in multidomain spoken dialogue systems”. Granted by TIN2008-06856-C05-04, Commission for Science and Technology. Research topics: Automatic audio content based on acoustic event detection.
- **Teacher Assistant - University of Zaragoza**, Zaragoza, Spain Fall-2011 & Fall-2012  
Taught laboratory of “Telecommunications Theory”: characterization of the elements of communication systems (transmitter, receiver, channel) and the signals associated to the communication process.
- **SRI International**, Menlo Park, CA, USA Spring & Summer 2012  
International internship: Designed and executed experiments for performing audio-based multimedia event detection on large collection of video files.
- **Lab.ROSA Columbia University**, New York City, NY, USA Spring & Summer 2011  
International internship: Implementation of acoustic event detection system based on factor analysis.
- **Fondazione Brunno Kessler**, Trento, Italy Spring & Summer 2010  
International internship: Implementation of acoustic event detection system based on Hidden Markov Models and Classification Trees (C4.5).
- **Instituto Tecnológico de Aragón (ITA)**, Zaragoza, Spain 2008 – 2009  
Scholarship: Development of a DGPS in the electronic area.

## Technical Skills

**Programming Languages:** Matlab, Python (numpy, scipy, matplotlib, mechanize), C/C++, Bash scripting, Perl, Low-Level Programming (DSP, VHDL, Assembly)

**Specialized Software:** Multi-job threading software in clusters (Condor, Sun Grid Engine), Weka, HTK

**Others:** Linux, Windows, L<sup>A</sup>T<sub>E</sub>X

## Awards, Grants & Honours

Cum Laude PhD. Thesis . . . . . 2014  
FPI Spanish Government Scholarship . . . . . 2009 – 2013  
Cum Laude Final Master Project . . . . . 2009  
Erasmus scholarship, Rome, Italy . . . . . 2006 – 2007