




# Berta Bescós Torcal



## Contact

  
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## Experience

- 2017–Now **University of Zaragoza** Zaragoza, Spain  
*PhD. Student in Computer Vision*  
 I am currently PhD. Student in Computer Vision at the Computer Science Department at the University of Zaragoza advised by Dr. José Neira. My main research interests lie in the intersection between perception and learning for robotics. The world surrounding us is complex and ever changing, which makes robots struggle to have a good understanding of the scene. My PhD. topic involves dealing with dynamic objects in Simultaneous Localization and Mapping problems for a better scene understanding with both geometry and semantics.  
 Remarkable achievements:
  - Research stay in Autonomous Systems Lab (ASL) in ETH Zürich, Switzerland for 5 months. My supervisors are César Cadena and Roland Siegwart
  - Attendance to RVSS in Kioloa, Australia.
- 2015 **Fersa Bearings** Zaragoza, Spain  
*Engineer Jr. in R&D department*  
 I had a 6 months internship in Fersa's R&D department. The role I had to play in the company was the development of new aftermarket and T1 products.
- 2015 **SARGA** Zaragoza, Spain  
*Basic Technician in Safety and Prevention of Labor Risks*  
 I updated the self-protection and emergency plan of the public company SARGA.
- 2010–2017 **Mis Clases Particulares** Zaragoza, Spain  
*Private Teacher*  
 I have been working as a private teacher of English, French and science subjects for students who aim to access university (e.g., Chemistry, Physics, Maths, Drawing).

## Education

- 2015–2017 **Master's Degree in Industrial Engineering, Robotics and Automation** Universidad de Zaragoza
- 2016–2017 **Master's Degree in Electronics and Automation** INSA Lyon  
 I spent 6 months at INSA Lyon (Lyon, France) under the Erasmus exchange program.
- 2011–2015 **Bachelor's Degree in Industrial Engineering** Universidad de Zaragoza
- 2014–2015 **Master's Degree in Systems, Control and Mechatronics** Chalmers University of Technology  
 I spent 6 months at Chalmers University of Technology (Göteborg, Sweden) under the Erasmus exchange program.

## Publications

- Empty Cities: Image Inpainting for Dynamic-Objects-Invariant Spaces  
**B. Bescos**, J. Neira, R. Siegwart, C. Cadena. Submitted to ICRA 2019
- Dynamic Objects Segmentation for Visual Localization in Urban Environments  
 G. Zhou, **B. Bescos**, M. Dymczyk, M. Pfeiffer, J. Neira, R. Siegwart. IEEE Workshop on From Freezing to Jostling Robots: Current Challenges and New Paradigms for Safe Robot Navigation in Dense Crowds, held with IROS 2018.
- DynaSLAM: Tracking, Mapping and Inpainting in Dynamic Scenes  
**B. Bescos**, JM. Fácil, J. Civera, J. Neira. Published at RA-L and IROS 2018.
- Detecting, Tracking and Eliminating Dynamic Objects in 3D Mapping using Deep Learning and Inpainting

**B. Bescos**, JM. Fácil, J. Civera, J. Neira. IEEE Workshop on Representing a Complex World: Perception, Inference, and Learning for Joint Semantic, Geometric, and Physical Understanding, held with ICRA 2018.

- Removing Dynamic Objects from 3D Maps using Geometry and Learning

**B. Bescos**, JM. Fácil, J. Civera, J. Neira. IEEE Workshop on Learning for Localization and Mapping, held with IROS 2017.

## Languages

**Spanish:** Native proficiency

**English:** Full professional proficiency – I got C1 Cambridge English certificate in 2016

**French:** Full professional proficiency – I got B2 EOI French certificate in 2017

## Volunteering Experience

2016	<b>Reconstruction of a school in India</b> FSL India Dharamsala, India I worked for one month, together with an international team, in the reconstruction of a school for Tibetan refugees in Dharamkot, Himachal Pradesh, India.
2015	<b>Reconstruction of a mountain shelter</b> Solidarités Jeunesses Vaunières, France I helped carry out the reconstruction of a mountain shelter in the French Alps for hosting people with disabilities and young people at risk of social exclusion.
2013	<b>Reconstruction of a watermill in Estonia</b> EstYES Viljandi, Estonia I worked together with international people on the reconstruction of a watermill in Viljandi, Estonia, for the supply of the area with electrical energy.