




# 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 and Robotics 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 Robotic Vision Summer School 2017 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 **Universidad de Zaragoza**  
 Master's Degree in Industrial Engineering, Robotics and Automation
- 2016–2017 **Institut National des Sciences Appliquées Lyon (INSA)**  
 I spent 6 months at INSA Lyon (Lyon, France) under the Erasmus exchange program.
- 2011–2015 **Universidad de Zaragoza**  
 Bachelor's Degree in Industrial Engineering
- 2014–2015 **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 a Dynamic-Object-Invariant Space  
**B. Bescos**, J. Neira, R. Siegwart, C. Cadena. Published at 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

**German:** Basic communication skills – I am currently learning german

## Volunteering Experience

- |      |   |                   |
|------|---|-------------------|
| 2016 | <p><b>Reconstruction of a school in India</b> FSL India</p> <p>I worked for one month, together with an international team, in the reconstruction of a school for Tibetan refugees in Dharamkot, Himachal Pradesh, India.</p>                     | Dharamsala, India |
| 2015 | <p><b>Reconstruction of a mountain shelter</b> Solidarités Jeunesses</p> <p>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.</p> | Vaunières, France |
| 2013 | <p><b>Reconstruction of a watermill in Estonia</b> EstYES</p> <p>I worked together with international people on the reconstruction of a watermill in Viljandi, Estonia, for the supply of the area with electrical energy.</p>                    | Viljandi, Estonia |