

Clara Fernández Labrador

`cfernandezlab.github.io`

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Interests and Objectives

My main area of interest lies on 3D Computer Vision and Deep Learning. I am particularly excited about 3D scene understanding, beyond the traditional sensors, and about unsupervised learning.

Work/Research Experience

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| 2020–Now (1 year) | Media Technology Center (MTC), ETH Zürich Postdoctoral Researcher Zürich, Switzerland |
| 2020 (3 months) | Disney Research Studios Research Engineer Supervised by Hayko Riemenschneider. Zürich, Switzerland |
| 2019–2020 (7 months) | Computer Vision Laboratory (CVL), ETH Zürich Visiting Researcher Automatic discovery of category-specific keypoints on collection of 3D objects, advised by Dr. Ajad Chhatkuli, Dr. Danda Pani Paudel and Professor Luc Van Gool. Zürich, Switzerland |
| 2017 (7 months) | Robotics, Perception & Real Time Group, University of Zaragoza Research Engineer 3D room layout reconstruction using single panoramic images, advised by Dr. Alejandro Perez and Professor Josechu Guerrero. Zaragoza, Spain |
| 2015 (5 months) | Colombin & Figlio Spa Undergraduate Intern Security management planning. Trieste, Italy |
| 2014 (3 months) | Tecnopackaging Undergraduate Intern 3D CAD design and injection simulations for human prosthetics with biocompatible plastic materials. Zaragoza, Spain |

Educational Background

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| 2017–2020 | Doctor of Philosophy in Computer Vision University of Zaragoza, Spain & University of Burgundy, France PhD Thesis: <i>Indoor Scene Understanding using Non-Conventional Cameras</i> . Advisors: Josechu Guerrero and Cédric Demonceaux |
| 2016–2017 | Erasmus Programme Politecnico di Torino, Italy |
| 2015–2017 | Master’s Degree in Industrial Engineering University of Zaragoza Master’s Thesis: <i>3D Room Layout Estimation from a Single 360 Panorama</i> . Advisors: Alejandro Perez and Josechu Guerrero |
| 2014–2015 | Erasmus Programme Università degli studi di Trieste, Italy |
| 2011–2015 | Bachelor’s Degree in Industrial Engineering University of Zaragoza Bachelor’s Thesis: <i>Security Management Planning</i> . Advisors: Ángel Fernández and Nicolich Marino |

Publications

Journals, Conferences and Workshops

- **[c4] Unsupervised Learning of Category-Specific Symmetric 3D Keypoints from Point Sets.** Clara Fernández Labrador, Ajad Chhatkuli, Danda Pani Paudel, José J. Guerrero, Cédric Demonceaux, Luc Van Gool. European Conference on Computer Vision (ECCV 2020).
- **[c3] What’s in my Room? Object Recognition on Indoor Panoramic Images.** Julia Guerrero-Viu*, Clara Fernández Labrador*, Cédric Demonceaux, José J. Guerrero. International Conference on Robotics and Automation (ICRA 2020).
- **[j2–c2–w3] Corners for Layout: End-to-End Layout Recovery from 360 Images.** Clara Fernández Labrador*, J. María Fácil*, Alejandro Pérez Yus, Cédric Demonceaux, Javier Civera, José J. Guerrero. Women in Computer Vision Workshop & Robotics and Automation Letters & International Conference on Robotics and Automation (CVPR 2019, RA-L & ICRA 2020).
- **[w2] PanoRoom: From the Sphere to the 3D Layout.** Clara Fernández Labrador, J. María Fácil, Alejandro Pérez Yus, Cédric Demonceaux, José J. Guerrero. 3D Reconstruction Meets Semantics Workshop (ECCV 2018).
- **[j1–c1] Layouts from Panoramic Images with Geometry and Deep Learning.** Clara Fernández Labrador, Alejandro Pérez Yus, Gonzalo López Nicolás, José J. Guerrero. Robotics and Automation Letters & International Conference on Intelligent Robots (RA-L & IROS 2018).
- **[w1] Full 3D Layout Reconstruction from One Single 360° Image.** Clara Fernández Labrador, Alejandro Pérez Yus, Gonzalo López Nicolás, José J. Guerrero. Women in Computer Vision Workshop (ECCV 2018).

Supervised Bachelor/Master Thesis

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| 2019 | <i>Object Recognition in 360 Images.</i> Julia Guerrero Campo. Bachelor's Degree in Computer Science, University of Zaragoza |
| 2018 | <i>Single View Layout Reconstruction.</i> Juan Carlos Medina. Bachelor's Degree in Industrial Engineering, University of Zaragoza |

Languages

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| English | Fluent (C1+) |
| Italian | Fluent (C1+) |
| French | Intermediate |
| Spanish | Native |

Reference List

- **Josechu Guerrero** (jguerrer@unizar.es)
University of Zaragoza
Robotics, Perception and Real-Time Group, I3A
Zaragoza, Spain
- **Cédric Demonceaux** (cedric.demonceaux@u-bourgogne.fr)
University of Burgundy
VIBOT ERL CNRS 6000, ImViA
Dijon, France
- **Ajad Chhatkuli** (ajad.chhatkuli@vision.ee.ethz.ch)
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Computer Vision Laboratory
Zürich, Switzerland
- **Danda Pani Paudel** (paudel@vision.ee.ethz.ch)
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Computer Vision Laboratory
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- **Hayko Riemenschneider** (hayko.riemenschneider@disneyresearch.com)
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