

CONTACT

INFORMATION

dhernandez0@gmail.com
<https://www.danihernandez.eu>
(+44) 07856 452 983
London, United Kingdom
Nationality: Spanish

RESEARCH
INTERESTS

Computer Vision: Color Constancy, Computational Photography, Stixel World and 3D Reconstruction.
Robotics: Autonomous Driving.
HPC: Parallel Computing, CUDA, GPGPU and Real-time Algorithms.

PROFESSIONAL
EXPERIENCE

Research Engineer **March 2019-February 2020**
Computer Vision group at Huawei Noah's Ark lab, London, United Kingdom
• Working on Color Constancy (Auto White Balance).
PhD Internship **June 2018-December 2018**
Computer Vision group at Element AI, Montreal, Canada
• Working on Deep learning and Computer Vision.
• Advisor: Dr. David Vazquez
PhD Internship **January 2017-July 2017**
Dept. of Environment Perception at Daimler AG, Stuttgart, Germany
• Scholarship: SEBAP mobility - Internship Grant
• Objective: To develop a faster and more accurate version of the Stixel World algorithm trying to get rid of some model assumptions.
• Advisor: Dr. Uwe Franke
Assistant Professor **2015-2018**
Computer Architecture and Operating Systems (UAB department), **Universitat Autònoma de Barcelona**, Spain
• Subjects: Fundamentals of Computer Science, Distributed Systems

EDUCATION

PhD in Computer Vision **2015-Currently**
Universitat Autònoma de Barcelona, Spain
• Thesis title: Embedded 3D Reconstruction for Autonomous Driving
• Advisors: Dr. Juan Carlos Moure and Dr. David Vázquez
• Area of Study: Computer Vision and High Performance Computing
• Scholarship: PIF Autonomous University grant
MSc in Computer Vision **2015**
Universitat Autònoma de Barcelona, Spain
• Dissertation title: A comparison of perceptual image quality metrics
Bachelor of Computer Science **2014**
Universitat Autònoma de Barcelona, Spain
• Dissertation title: A metric to measure the difference between images

PUBLICATIONS

Journal Papers

Slanted Stixels: A way to represent steep streets **2019**

D. Hernandez-Juarez*†, L. Schneider*, P. Cebrian, A. Espinosa, D. Vázquez, A. M. López, U. Franke, M. Pollefeys, & J. C. Moure

In *International Journal of Computer Vision (2019) (IJCV)*

* Both authors contributed equally

† Work performed during an internship at Daimler AG

Conference Papers

A Multi-Hypothesis Approach to Color Constancy **2020**

D. Hernandez-Juarez, S. Parisot, B. Busam, A. Leonardis, G. Slabaugh, & S. McDonagh

In *Computer Vision and Pattern Recognition 2020 (CVPR2020)*

Slanted Stixels: Representing San Francisco's Steepest Streets **2017**

D. Hernandez-Juarez*†, L. Schneider*, A. Espinosa, D. Vázquez, A. M. López, U. Franke, M. Pollefeys, & J. C. Moure

In *British Machine Vision Conference 2017 (BMVC2017)*

Awarded as **Best Industry Paper**

* Both authors contributed equally

† Work performed during an internship at Daimler AG

GPU-accelerated real-time stixel computation **2017**

D. Hernandez-Juarez, J. C. Moure, A. Espinosa, D. Vázquez, & A. M. López

In *Winter Conference on Applications of Computer Vision 2017 (WACV2017)*

Embedded real-time stereo estimation via Semi-Global Matching on the GPU **2016**

D. Hernandez-Juarez, A. Chacón, A. Espinosa, D. Vázquez, J. C. Moure, & A. M. López

In *International Conference on Computational Science 2016 (ICCS2016)*

TECHNICAL SKILLS **Programming:** C/C++, Assembler, Matlab, Python, .NET, Java, SQL
Libraries: *Vision* (OpenCV, VTK, VLFeat), *Deep Learning* (PyTorch, Caffe), *HPC* (CUDA, SIMD, Intel intrinsics, OpenMP)
Others: L^AT_EX, MS Office

LANGUAGES **Spanish:** Native Language **English:** Fluent proficiency
Catalan: Native Language

AWARDS **Best Industrial Paper Award - BMVC** **2017**

FELLOWSHIP **PIF-UAB - Doctoral fellowship** **2015-2018**

SEBAP Mobility - Internship fellowship **2017**