

Hanz Cuevas Velasquez

PHD | EX-MICROSOFT RESEARCH INTERN · COMPUTER VISION

Nauklerstrasse 52, 72074, Tuebingen, Germany

☎ (+44) 07869609941 | ✉ cuevhv@gmail.com | 🏠 hanzcuevas.com/ | 📷 hanzcv | 📧 Cuevas-Velasquez

Summary

I am a Research Scientist, at Max Planck Institute (MPI) under Michael Black supervision, focusing on integrating Machine Learning with digital humans.

I completed a Ph.D. in Computer Vision at the University of Edinburgh, specializing in 3D scene understanding, with a focus on disparity estimation and semantic segmentation for 3D point cloud data. I also worked for a year at Microsoft Mixed Reality Labs, where I contributed to the digital human generation pipeline and researched egocentric pose estimation using human parametric models.

I have authored several papers as well as a technical report on generating digital humans in collaboration with Microsoft.

I am excited to apply my skills, experience, and expertise to a new opportunity and contribute to cutting-edge research in computer vision.

About Me

Research	Egocentric pose estimation, Scene understanding, 3D Computer Vision, Machine learning, Segmentation, Robotics.
Programming	Python, Pytorch, Tensorflow, Keras, ROS
3D Modeling	Blender

Experience

Max Plank Institute for Intelligent Systems

Tübingen, Germany

RESEARCH SCIENTIST

07/2023 - Now

- Part of the Perceiving Systems at Michael Black's team. Working on 3D humans and generative models.
- Manager: Michael J. Black

Microsoft

Cambridge, United Kingdom

RESEARCH INTERN

03/2022 - 10/2022

- Research on egocentric pose estimation for digital humans.
- Contributed to the core human synthetic generation pipeline.
- Published a tech report on digital human generation (link).
- Got a patent for the paper and XR device created during the internship.
- Internship extension: due to good performance.
- Manager: Tadas Baltrusaitis

The University of Edinburgh

Edinburgh, United Kingdom

TEACHING ASSISTANT: ADVANCED VISION

01/2018 - 08/2020

- Preparing labs and assignments for the Advanced Computer Vision course.
- The course is taught at the graduate level by Prof. Bob Fisher.
- Topics: Feature matching, disparity and depth estimation, 3D point set rigid registration, deep learning applied to computer vision.

The University of Edinburgh

Edinburgh, United Kingdom

MARKER: INTRODUCTORY APPLIED MACHINE LEARNING (IAML)

09/2017 - 12/2017

- Marking assignments of the students taking IAML course.
- The course is taught at the graduate level by Nigel Goddard.

Catolica Boliviana San Pablo University

La Paz, Bolivia

RESEARCH INTERN

07/2014 - 02/2015

- Real time face detection research.
- Building FPGA embedded systems using HDL.

Selected Publications

2025	ICCV , Tomasz Niewiadomski, Anastasios Yiannakidis, Hanz Cuevas-Velasquez, Soubhik Sanyal, Michael J Black, Silvia Zuffi, and Peter Kulits. Generative zoo. <i>arXiv preprint arXiv:2412.08101</i> , 2024	
	3DV , Hanz Cuevas-Velasquez, Charlie Hewitt, Sadegh Aliakbarian, and Tadas Baltrušaitis. Simpleego: Predicting probabilistic body pose from egocentric cameras. In <i>2024 International Conference on 3D Vision (3DV)</i> , pages 1446–1455. IEEE, 2024	
2022	Technical Report - Microsoft , Procedural Humans for Computer Vision.	
	BMVC , Hanz Cuevas-Velasquez, Antonio Javier Gallego, and Robert B. Fisher. Two heads are better than one: Geometric-latent attention for point cloud classification and segmentation. In <i>32nd British Machine Vision Conference, BMVC 2021</i> . British Machine Vision Association, BMVA, 2021	
2021	ICRA , Hanz Cuevas-Velasquez, Antonio-Javier Gallego, Radim Tylecek, Jochen Hemming, Bart van Tuijl, Angelo Mencarelli, and Robert B Fisher. Real-time stereo visual servoing for rose pruning with robotic arm	
2020	Computers and electronics in agriculture Journal , Hanz Cuevas-Velasquez, Antonio-Javier Gallego, and Robert B Fisher. Segmentation and 3d reconstruction of rose plants from stereoscopic images. <i>Computers and electronics in agriculture</i> , 171:105296, 2020	

Education

The University of Edinburgh	<i>Edinburgh, United Kingdom</i>
PHD. IN INFORMATICS - COMPUTER VISION	09/2017 - 03/2022
• Awarded with the TrimBot2020 - Horizon2020 project scholarship. • Research: 2D and 3D scene understanding for object localization and navigation. • Supervisor: Professor Bob Fisher.	
The University of Edinburgh	<i>Edinburgh, United Kingdom</i>
MSc. IN ARTIFICIAL INTELLIGENCE (WITH MERIT)	09/2016 - 08/2017
• Courses focused on statistical machine learning and natural language processing. • Thesis: Multi-class Classification of Surgical Instruments Using Multiple RGB-D sensors. • Supervisor: Professor Bob Fisher.	

Extra Courses

Massachusetts Institute of Technology	<i>Cambridge, MA, United States</i>
MIT DEEP TECHNOLOGY BOOTCAMP	2019
• Building devices with artificial intelligence, internet of thing and autonomous vehicles technology	
Aachen University and ROS	<i>Aachen, Germany</i>
ROBOT OPERATING SYSTEM (ROS) SUMMER SCHOOL	2019
• Learn and operate ROS systems for mobile robot navigation. • 3rd place in the robot navigation contest.	

Languages

Spanish	Native
English	Advanced
Italian	Intermediate

References

Michael Black - Managing Director of Perceiving Systems at Max Planck Institute	<i>Tübingen, Germany</i>
BLACK@TUE.MPG.DE	
• Role: Manager	
Tadas Baltrušaitis - Principal Scientist at Microsoft	<i>Cambridge, United Kingdom</i>
TADAS.BALTRUSAITIS@MICROSOFT.COM	
• Role: Internship Manager	
Bob Fisher - Professor at The University of Edinburgh	<i>Edinburgh, United Kingdom</i>
R.B.FISHER@ED.AC.UK	
• Role: PhD Supervisor	