

Manel Baradad Jurjo

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Google Scholar

EDUCATION

CSAIL, Massachusetts Institute of Technology (MIT)

2018 – 2024

PhD, Computer Science

Advisor: Antonio Torralba

Polytechnic University of Catalonia (UPC)

2015 – 2017

MS, Electrical Engineering

CFIS, UPC

2011 – 2015

BS, Electrical Engineering

BS, Computer Engineering

WORK / RESEARCH EXPERIENCE

Amazon Science, BCN, Spain

Sep 2024 – Present

Applied Scientist

- Applied research in image generation and understanding for product placement and marketing campaigns, deployed at Amazon scale.
- Trained and deployed large-scale multimodal diffusion models (vision-language and image-editing foundation models) for product image generation using PyTorch and distributed multi-GPU training.
- Built end-to-end Python ML pipelines for data curation, large-scale training, evaluation, and deployment of LLMs and vision-language models.
- AGI team: designed and trained cartridges for Retrieval-Augmented Generation (RAG), enabling context compression and efficient long-context inference for large language models.

Google, GeometricAI, NYC

Jun 2023 – Feb 2024

Research Internship

Research in volumetric rendering using wavelet decomposition

Google, Viscam, Cambridge, USA

Jun 2022 – Sep 2022

Research Internship

Research in object-centric depth reconstruction from single image

Uber ATG, San Francisco (remote) <i>Research Summer Internship</i> Research in novel view synthesis for autonomous driving simulation	Jun 2020 – Sep 2020
Research Assistant, CSAIL, MIT Advisor: Antonio Torralba	May 2017 – May 2018
Research Assistant, Image Processing Group, UPC Advisor: Xavier Giró-i-Nieto	Sep 2016 – Apr 2017
Zhilabs, Barcelona <i>Software Engineer</i> Developed algorithms for root cause analysis in telecommunications networks	Jun 2015 – Oct 2016
Research Assistant, Relational Algorithmics, Complexity and Learning Lab, UPC Advisor: Ricard Gavaldà	Feb 2015 – Jul 2015

PUBLICATIONS

PLACID: Identity-Preserving Multi-Object Compositing via Video Diffusion with Synthetic Trajectories

Gemma Canet Tarrés, **Manel Baradad**, Francesc Moreno-Noguer, Yumeng Li. *CVPR 2026*

Separating Knowledge and Perception with Procedural Data

Adrián Rodríguez-Muñoz, **Manel Baradad**, Phillip Isola, Antonio Torralba. *ICML 2025*

A Vision Check-up for Language Models

Pratyusha Sharma, Tamar Rott Shaham, **Manel Baradad**, Stephanie Fu, Adrián Rodríguez-Muñoz, Shivam Duggal, Phillip Isola, Antonio Torralba. *CVPR 2024 (Highlight)*

Procedural Image Programs for Representation Learning

Manel Baradad, Chun-Fu Chen, Jonas Wulff, Tongzhou Wang, Rogerio Feris, Antonio Torralba, Phillip Isola. *NeurIPS 2022*

Learning to See by Looking at Noise

Manel Baradad*, Jonas Wulff*, Tongzhou Wang, Phillip Isola, Antonio Torralba. *NeurIPS 2021 (Spotlight)*

Height and Uprightness Invariance for 3D Prediction From a Single View

Manel Baradad, Antonio Torralba. *CVPR 2020*

Using Unknown Occluders to Recover Hidden Scenes

Adam B. Yedidia, **Manel Baradad**, Christos Thrampoulidis, William T. Freeman, Gregory W. Wornell. *CVPR 2019*

Inferring Light Fields From Shadows

Manel Baradad, Vickie Ye, Adam B. Yedidia, Frédo Durand, William T. Freeman, Gregory W. Wornell, Antonio Torralba. *CVPR 2018 (Spotlight)*

Recurrent Neural Networks for Semantic Instance Segmentation

Amaia Salvador, Miriam Bellver, Victor Campos, **Manel Baradad**, Ferran Marques, Jordi Torres, Xavier Giro-i-Nieto. *CVPR 2018 DeepVision Workshop*

Characterizing chronic disease and polymedication prescription patterns from electronic health records

Martí Zamora, **Manel Baradad**, Ester Amado, Silvia Cordoní, Esther Limón, Juliana Ribera, Marta Arias, Ricard Gavaldà. *DSAA 2015*

PREPRINTS

Background Prompting for Improved Object Depth

Manel Baradad, Yuanzhen Li, Forrester Cole, Michael Rubinstein, Antonio Torralba, William T. Freeman, Varun Jampani. *arXiv 2023*

Deep Augmentation: Enhancing Self-Supervised Learning through Transformations in Higher Activation Space

Rickard Brüel-Gabrielsson, Tongzhou Wang, **Manel Baradad**, Justin Solomon. *arXiv 2023*

HONORS AND AWARDS

"laCaixa" fellowship for graduate studies in USA

Full tuition and stipend for two years

2018

"Fundació Catalunya-La Pedrera" fellowship

Full tuition of the Master's degree

2015

CFIS fellowship

Full tuition of the Bachelor's degree

2012

LANGUAGES

English: Fluent · Spanish, Catalan: Native · French: Basic (in progress)