

German Barquero

Curriculum Vitae



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Google Scholar for Full List of Publications

EDUCATION

- 2022 – 2026 **PhD in Mathematics and Computer Science**
SUMMER SCHOOLS: ICVSS'23, GEMSS'23
Universitat de Barcelona
- 2020 – 2021 **Master in Computer Vision**
BEST STUDENT AWARD (1/30)
Universitat Autònoma de Barcelona
- 2014 – 2020 **Bachelor of Mathematics**
Bachelor of Computer Science
Universitat de Barcelona

RESEARCH EXPERIENCE

JUN 2024 - NOV 2024 (FT¹ - 6 MONTHS)
Meta Reality Labs
Research Scientist Intern
Upcoming...

MAR 2021 - FEB 2022 (FT - 1 YEAR)
Universitat de Barcelona
Graduate research intern
I led the organization of the *Behavior Prediction* competition within the scopes of the DYAD ICCV'21 workshop. I conducted research on novel models that established a strong baseline on this problem for the novel UDIVA v0.5 dataset.

SEP 2020 - MAR 2021 (PT - 7 MONTHS)
Herta Security
Applied research scientist
I developed a very fast and accurate face tracking algorithm (T-BIOM 2021) and worked on quantization and object detection.

MAR 2020 - AUG 2020 (FT - 6 MONTHS)
Centre hospitalier universitaire vaudois
Graduate research intern
We explored the capabilities of several MRI modalities for detecting paramagnetic rim lesions in multiple sclerosis (RimNet, *NeuroImage: Clinical*) and the challenges of ultra-high-field MRI.

SEP 2019 - FEB 2020 (FT - 6 MONTHS)
École polytechnique fédérale de Lausanne
Undergraduate research intern
In collaboration with an interdisciplinary medical imaging team, I developed RimNet, a multimodal deep network that detects paramagnetic rims around multiple sclerosis lesions in MRI, proving itself as a promising tool to aid doctors with prognosis.

JUN 2019 - SEP 2019 (FT - 4 MONTHS)

Herta Security
Undergraduate research intern

I conducted research on efficient tracking algorithms. I collected and annotated a dataset for face tracking in large crowds and developed a fast novel face tracking algorithm (awarded at IJCB 2020).

OTHER WORK EXPERIENCE

- SEP 2018 - JUN 2019 **IT Support** - *Universitat de Barcelona*
JUL 2015 - JUN 2016 **Full-Stack Developer** - *Getupcode.com*

TECHNICAL SKILLS

INTERMEDIATE C++, Java, Keras, OpenVINO
EXPERT Python, TensorFlow, PyTorch
OpenCV, L^AT_EX

PUBLICATIONS

Ruiz-Ponce, P., **Barquero, G.**, et al. (2024). in2IN: Leveraging individual Information to Generate Human INTERactions. *CVPR Workshops 2024*.

Barquero, G., Escalera, S., and Palmero, C. (2024). Seamless Human Motion Composition with Blended Positional Encodings. *CVPR 2024*.

Song, S., Spitale, M., Luo, C., Palmero, C., **Barquero, G.**, et al. (2024). REACT 2024: the Second Multiple Appropriate Facial Reaction Generation Challenge. *FG Challenge 2024*.

Barquero, G., Escalera, S., and Palmero, C. (2023). BeLFusion: Latent Diffusion for Behavior-Driven Human Motion Prediction. *ICCV 2023*.

Song, S., Spitale, M., Luo, C., **Barquero, G.**, et al. (2023). REACT2023: The First Multiple Appropriate Facial Reaction Generation Challenge. *ACM MM Challenge 2023*.

Palmero, C., **Barquero, G.**, et al. (2022). Chalearn LAP challenges on self-reported personality recognition and non-verbal behavior forecasting during social dyadic interactions: Dataset, design, and results. *ICCV Workshops 2021*.

Barquero, G., et al. (2022). Didn't see that coming: a survey on non-verbal social human behavior forecasting. *ICCV Workshops 2021*.

Barquero, G., et al. (2022). Comparison of Spatio-Temporal Models for Human Motion and Pose Forecasting in Face-to-Face Interaction Scenarios. *ICCV Workshops 2021*.

Barquero, G., Hupont, I., and Fernandez, C. (2021). Rank-based verification for long-term face tracking in crowded scenes. *IEEE T-BIOM*.

¹Abbreviations: FT, full time; PT: part time.

La Rosa, F., Yu, T., **Barquero, G.**, et al. (2021). MPRAGE to MP2RAGE UNI translation via generative adversarial network improves the automatic tissue and lesion segmentation in multiple sclerosis patients. *Computers in Biology and Medicine*.

Barquero, G., Fernandez, C., and Hupont, I. (2020). Long-Term Face Tracking for Crowded Video-Surveillance Scenarios. *IJCB 2020. Best student paper award (runner-up)*.

Barquero, G., et al. (2020). RimNet: A deep 3D multimodal MRI architecture for paramagnetic rim lesion assessment in multiple sclerosis. *NeuroImage: Clinical*.

TALKS

DLBCN (2023). BeLFusion: Latent Diffusion for Behavior-Driven Human Motion Prediction.

TEACHING

2024. Flows and Diffusion Models, and Video Generative Models (Master in Computer Vision, UAB). **2022**. Advanced Algorithms (Bachelor in Computer Science, UB).

SUPERVISION

Master's thesis

Àlex Pujol Vidal (2023). Motion Binary Latent Diffusion. *Universitat de Barcelona*.

Pablo Ruiz Ponce (2023). Text-Driven Multi-Human Motion Generation. *Universitat de Barcelona*.

Johnny Núñez Cano (2022). Comparison of Spatio-Temporal Hand Pose Denoising Models. *Universitat de Barcelona*.

Nikita Belousov (2022). Generating Sign Language Videos using DDPM. *Universitat de Barcelona*.

REVIEWING

Journals.

International Journal of Computer Vision (**2023, 2024**)

International Journal of Social Robotics (**2023, 2024**)

Transactions on Visualization and Computer Graphics (**2022**)

Machine Learning (**2022**)

Conferences.

ECCV (**2024**), CVPR (**2024**), ACM Multimedia (**2023**), WACV (**2022**)